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ABSTRACT

Designed to provide information about people's listening and reading skills, this battery of tests provides information about how well an individual or group listens or reads in comparison to the young adult population used as a norm for this assessment battery. The battery was developed for use with youth and adult populations at or above 10 years of age (grade five or above) and consists of three subtests: a paragraph test, a vocabulary test, and a decoding test. Research indicates that the LAB may be particularly useful in middle and secondary school remedial literacy programs and in developmental studies programs. It has also been developed to assess the likelihood that a population of unskilled readers will be able to learn and perform military jobs. (This document is one of those reviewed in The Research Instruments Project (TRIP) monograph "Measures for Research and Evaluation in the English Language Arts, Volume 2," published by the Committee on Research of the National Council of Teachers of English in cooperation with the ERIC Clearinghouse on Reading and Communication Skills. The TRIP review, included here as an introduction to the instrument, describes the instrument's category (reading), title, author, date, age range (intermediate through postsecondary and adult), purpose, and physical characteristics.) (HTH)

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ED236659

Manual for the Administration and Interpretation of the Literacy Assessment Battery (LAB). Technical Memorandum 82-4.

The measurement instruments contained in this document have been reviewed in a monograph (cited below) edited by William T. Fagan, Charles Cooper, and Julie Jensen, for The Research Instruments Project (TRIP), and funded by a grant from the Trustees of the NCTE Research Foundation:

Measures for Research and Evaluation
in the
English Language Arts
Volume II

The purpose of the editors has been to select and review measurement instruments pertaining to all aspects of research and evaluation in the English language arts, e.g. language and language development, literacy, literature, reading (including comprehension, teacher-pupil interaction, etc.), writing, and teacher knowledge and attitudes. In order to make some of the actual instruments reviewed more readily available, the ERIC Clearinghouse on Reading and Communication Skills (ERIC/RCS) has cooperated with the editors by processing selected instruments into the ERIC system (see the 42 documents assigned Clearinghouse accession numbers CS 207 904-945).

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CS 207934

Category: Literacy

Title: Literacy Assessment Battery (LAB)

Author: Thomas G. Sticht et al.

Age Range: Adult

Description of the Instrument:

Purpose: To be used as a supplement to the Armed Services Vocational Aptitude Battery (ASVAB) for use as a selection and classification instrument for the military services.

More specifically the LAB was designed to assess the degree to which the "gap" between auding and reading has been closed. The underlying rationale was that many lower aptitude persons are unskilled readers and the ASVAB tests, which demand reading skills for successful performance cannot discriminate among the poor readers between those with poor oral language comprehension skills and those with relatively well-developed oral language skills but who have problems with written language. Secondly, many job skills depend more on listening and watching than on reading.

Date of construction: 1982

Physical description: The LAB consists of three sections: paragraph, vocabulary, and decoding. Within each section, items are presented orally or in reading, or in both modes simultaneously.

The first section consists of four paragraphs, two of which are read silently. The passages are 150 and 190 words long and are at a ninth grade level as measured by the FORCAST formula for assessing readability. Subjects are required to answer 12 questions per passage involving recall of facts.

The Vocabulary section consists of 28 words, 14 of which are presented in an auding/reading situation, and 14 of which are presented in a reading situation. The subjects are expected to choose the correct synonym for each word from among the alternatives. The words are taken from the paragraphs in the first section.

The Decoding section also contains paragraphs at a ninth grade level which are adult oriented. Subjects must detect and circle mismatches between the words on the page and these words read aloud by the examiner. The passages are simultaneously read and auded and are presented at varying rates from 100 to 250 words per minute.

Validity, Reliability, and Normative Data:

Concurrent validity was established for the LAB by calculating Pearson Product moment correlations between the LAB total scores and its subscores and total and subscores on the Nelson-Denny Reading Test, Forms C and D; The Gates-MacGinitie Reading Test, Form D; and the Basic Skills Assessment: Reading. All correlations were statistally significant.

Predictive validity was determined by analysing the records of 551 people with no prior service who were still in the service two years

after entry. The LAB proved to be a good predictor of: qualification status, probability of being separated from the service for failure to meet minimal behavioral or performance criteria, probability of such separation occurring within the first six months of service or subsequently, months of service before separation, and highest pay grade received.

Three methods were employed to establish reliability for the test. (1) As a measure of internal consistency, all LAB subscores were correlated with each other, and with the total score. All correlations were substantial. For example, of people who performed in the fourth quartile on the Reading Vocabulary subtest, 82 % also performed in the fourth quartile on the Auding/Reading Vocabulary subtest. (2) Correlations for each of the test subsections as computed by the Kuder-Richardson 21 formula ranged from .83 to .91. (3) AS a third measure of reliability, scores on each of the four Vocabulary and Paragraph subtests were decomposed into parts, each part being associated with one of the two passages making up that subtest. Pearson Product moment correlations between each set of subscores ranged between .71 and .80.

The LAB was normed on 4599 service applicants who were tested at 25 geographically dispersed Armed Forces Examining and Entrance Stations. LAB score conversion tables were prepared by means of an equipercentile norming procedure. These tables allow the conversion of raw scores on any LAB component or on LAB total score to percentile equivalents, reading grade levels on the Gates-MacGinitie and Nelson-Denny tests, standard scores on the Basic Skills Assessment and percentiles on the Armed Forces Qualification Test (AFQT), and the General Technical (GT) composite of the ASVAB. As an alternative to the equipercentile method for norming the LAB, regression equations were computed for relating LAB scores to Nelson-Denny and Gates-MacGinitie reading grade levels and to AFQT percentiles.

Related Documents:

Sticht, T., and Beck, L. Experimental Literacy Assessment Battery (LAB), AFHRL - TR-76-51. Lackland Air Force Base, Texas: Air Force Human Resources Laboratory, August, 1976.

Sticht, T., Beck, L., Hauke, R., Kleinman, G., and James, J. Auding and Reading: A Developmental Model. Alexandria, Virginia: Human Resources Research Organization, 1974. (ED 021 503)

MANUAL FOR THE ADMINISTRATION AND INTERPRETATION OF THE LITERACY ASSESSMENT BATTERY (LAB)

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Human Resources Research Organization

Technical Memorandum 82-4
Directorate for Accession Policy
Office of the Secretary of Defense

April 1982

PREFACE

The present report is one of a series resulting from research under Contract No. MDA903-80-C-0588 Evaluation of the Predictive Validity of the Literacy Assessment Battery (LAB). This research is sponsored by the Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics), Directorate for Accession Policy. Dr. W.S. Sellman is the technical monitor for this work. Data for norming the LAB were provided by Dr. Lonnie Valentine and Mr. John Mathews, Air Force Human Resources Laboratory, Brooks Air Force Base, Texas. Data analysis support was provided by the staff of the Defense Manpower Data Center (DMDC) in Alexandria, Virginia and Monterey, California. The support of these individuals and organizations in the conduct of this research is greatly appreciated.

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Manual for the Administration and Interpretation of the Literacy Assessment Battery (LAB)

LITERACY ASSESSMENT BATTERY EXAMINER'S MANUAL

INTRODUCTION

NATURE AND PURPOSE OF THE LAB

The Literacy Assessment Battery (LAB) is a battery of tests designed to provide information about people's auding and reading skills. It provides information about how well an individual or a group auds or reads in comparison to the young adult population used to norm the LAB. It also permits a direct comparison of the auding and reading skills of an individual or group. Information about discrepancies between a person's ability to comprehend and learn from spoken and written language is useful in identifying the nature of reading problems and the diagnosis of remedial training to be undertaken.

The LAB was developed to be used with youth and adult populations at or above 10 years of age (grades 5 and above). Research studies were conducted to determine the suitability of the content and the appropriateness of the tasks for this population (Sticht, 1978; Sticht and Beck, 1976). Results suggest that the LAB may be particularly useful in middle and secondary school remedial literacy programs and in developmental studies programs in community colleges.

Development of the LAB was sponsored by the Department of Defense as a supplement to the Armed Services Vocational Aptitude Battery (ASVAB) to aid in making selection and classification decisions. It provides information useful in deciding which members of a population of unskilled readers are likely to be successful in learning and performing military jobs (Sticht, Hooke and Caylor, 1981). It may therefore be of use to Jobs Corps or similar human resources development activities that have as one of their goals the preparation of young people to meet the armed services entrance requirements.

REASONS FOR MEASURING AUDING AND READING SKILLS

The development of the Literacy Assessment Battery was based on the fact that, ordinarily, pre-literate children, youth, or adults in our society have learned to understand the English language by listening to speech (auding) before they can understand it by looking at writing or print (reading). In the typical case, pre-literate people have already developed a great deal of knowledge about the meanings of words (vocabulary) and the rules for using them (syntax) by the time they begin to learn to read. As they learn to read, they gradually acquire the ability to comprehend by reading language they could previously comprehend only by auding. They do this by learning to recognize words and syntactical patterns in printed language that were previously recognizable by auding the spoken language. This process of recognizing printed words and syntax and identifying them with spoken words and syntax, and the meaning conveyed by the latter, is called decoding.

Because reading is, in many respects, the comprehension of speech written down, it follows that, if people's speech skills are low, their reading skills will be low. It is, therefore, possible that poor performance on a reading test might reflect poor decoding skills, poor oral language skills, or both. But it is not possible to determine which of these alternatives apply to a given individual or group without assessing the ability to comprehend language presented in both the spoken form for auding, and the written form for reading. The LAB does this.

It is important to know if unskilled reading reflects mainly problems in decoding because then the prognosis is for fairly rapid improvement from reading instruction that emphasizes training and practice in recognizing written language (decoding).

On the other hand, if a person is unskilled at comprehending oral language through auding, it is likely that reading skill will suffer because both the decoding and comprehending of written language is dependent upon the ability to comprehend oral language. Nowhere is this more evident than in the case of the deaf, whose reading scores after 12 years of education are typically 7 to 8 years behind those of their hearing peers, even though their abilities to learn are equivalent (Gibson and Levin, 1975). The prognosis for the development of literacy in unskilled readers whose oral language skills are also underdeveloped is for slower rates of growth in programs that develop higher levels of language skills while also teaching decoding of written language.

It is possible that, even though people are unskilled readers, they may nevertheless read better than they comprehend oral language. This has been observed in the case of students whose native language was not English (Sticht, 1978). In that case, English was a second language and the permanent nature of the printed message made it possible to give prolonged study to the message, whereas the spoken language was fleeting and demanded efficient auding decoding skills and extensive vocabulary knowledge.

It has also been found that many unskilled and most skilled adult readers perform reading tasks like those found in the LAB and similar tests (Durrell and Brassard, 1970) better by reading than by auding. This may reflect the fact that the performance of such tasks by reading is extensively practiced in schools while practice in performing similar auding tasks is practically nonexistent in the schools. Also, the permanent nature of the written language may permit skilled readers to skip, read selectively, and reread, none of which can be done with a fleeting spoken message that comes and goes at the rate of the speaker, as is the case in the LAB and similar tests.

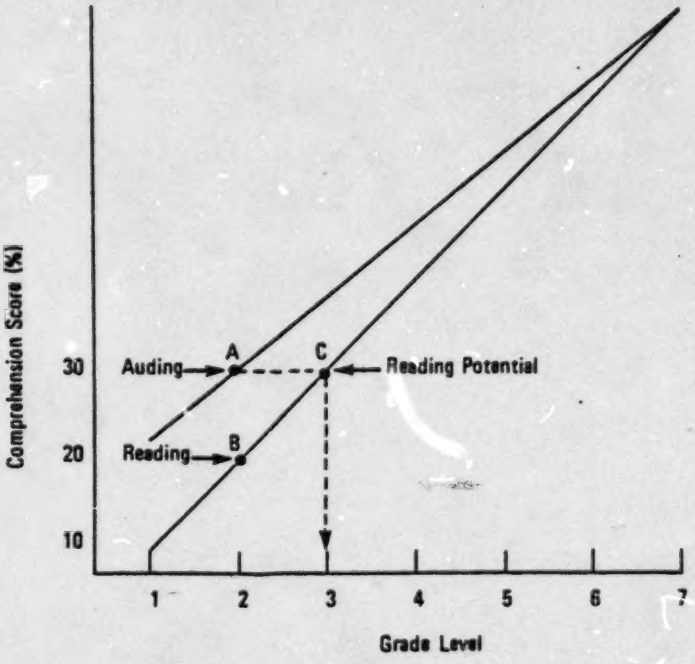
For individuals who are unskilled at both auding and reading when compared to the norms for their age peers, and who perform better by reading than by auding, the prognosis for literacy instruction is similar to that for the person whose reading and auding skills are comparable and both are low, though the method of instruction can focus on a greater use of written over oral language to develop higher levels of language comprehension skills.

MEASURING READING POTENTIAL

Because people typically learn to comprehend language by auding before they can comprehend it by reading, it is possible to consider that, in learning to read, they close the "gap" between the auding skill and the reading skill, both of which permit them to comprehend messages presented in language. In learning to read, therefore, the person's task may be viewed as learning to comprehend the printed form of language, with the same accuracy and efficiency as he or she can comprehend the spoken form of language.

The process of closing the gap between auding and reading is illustrated hypothetically in Figure 1. There it is seen that children or adults who are just beginning to learn to read, comprehend language better by auding than by reading. As they progress through the grade levels, they acquire more and more skill in reading until, at some point, they close the gap between auding and reading skills.

Figure 1 should be studied carefully because it presents four important scores that can be obtained using the LAB. First, notice that Figure 1 presents grade level scores along the horizonal axis. Next, look at the dot labeled "reading" directly over the 2nd grade level. That dot represents a reading level of grade 2. Thus, people achieving the



A – Indicates the normative auding score for the 2nd grade, called auding at the 2nd grade level.

B – Shows the normative reading score for the 2nd grade, called the 2nd grade level.

C – Shows conversion of the normative auding score to a reading "potential" score by drawing a horizontal from A to intersect with the reading curve, and then dropping a perpendicular line to the abscissa.

The example shows a reading potential score of 3rd grade.

Thus, the case illustrated shows a person auding and reading at the 2nd grade level, with a reading potential score of 3rd grade level.

Figure 1. Schemata Showing Relationships Among Auding and Reading Comprehension Scores as a Function of School Grade Level

comprehension score corresponding to that dot on the vertical axis of the figure are said, by definition, to be reading at the 2nd grade level. Similarly, people achieving an auding comprehension score corresponding to the dot labeled "auding" are auding at the 2nd grade level. This illustrates that, on a norm-referenced basis, a person may be equivalent in auding and reading (both skills are at the 2nd grade level) even though the auding score is greater than the reading score. The LAB provides measures of normative grade level scores for auding and reading.

In addition to the normative scores for auding and reading, a third score of importance is the difference score between auding and reading at a given grade level. This difference score provides a value for the magnitude of the gap between auding and reading. In Figure 1, the auding comprehension score corresponding to the 2nd grade normative auding level is 30, while the corresponding reading gap is equal to 30-20=10. Thus, if a person reading at the 2nd grade level were able to read as well as he can aud, he could improve his comprehension performance by 10%. That is, there is an auding-reading gap score of 10%.

The auding-reading gap score shows on an absolute score basis how much improvement in comprehension test performance would be expected if a person could read as well as he could aud. It does not, however, indicate how good such performance is relative to the performance of some defined reference group. For this purpose, the reading potential score is derived. The reading potential score is derived as illustrated in Figure 1. It consists of treating the auding comprehension score as though it were a reading comprehension score, and then using the reading distribution curve to convert the auding score into an equivalent reading grade level score. In the example of Figure 1, the comprehension score of 30% is equivalent to a 2nd grade normative auding level, while it is equivalent to a 3rd grade normative reading grade level. This means that, on the average, it is not until the 3rd grade skill level that people typically achieve 30% correct on the comprehension measure by reading. But they typically achieve 30% correct by auding at the 2nd grade skill level. Thus, a 2nd grade level auding score is equivalent to a 3rd grade reading score. In this case, we say that the person has a normative reading level of grade 2, a normative auding level of grade 2, and a reading potential score of grade 3.

In this manual, whenever we refer to reading potential scores, we will always refer to auding scores transformed to reading grade level equivalent scores as illustrated in Figure 1, though at times we will replace the grade level scores on the horizontal axis with percentile scores. Notice that the reading potential score is not the same as the auding-reading gap score. It is entirely possible to have a small gap score transformable into a large reading potential score, or a large gap score transformable into a small reading potential score. It is even possible to have a negative gap score, that is, one in which reading comprehension exceeds auding comprehension, which is transformable into a reading potential score smaller than the actual normative reading level. All of these outcomes depend upon the auding and reading distribution curves. Figure 1 shows an hypothetical situation where there is a direct, straightline relationship between the auding-reading gap score and the reading potential score, i.e., the smaller the gap score, the smaller the reading potential score. Actual data from norming studies rarely produce such regular curves.

THE LITERACY ASSESSMENT BATTERY (LAB)

The LAB consists of three subtests: a Paragraph Test, a Vocabulary Test, and a Decoding Test. These tests are described in summary form in Table 1 and in more detail below.

The central test in the LAB, the Paragraphs Test was designed for comparing how well an adult reads connected text to how well he or she auds comparable materials under comparable conditions, to determine whether or not there is a "gap" between comprehension by these two modalities. In the Paragraphs Test, two passages are read aloud to examinees (Auding Subtest), and they are asked to read an additional two passages to themselves (Reading Subtest). These passages consist of adult-oriented material written at approximately the 9th grade level of difficulty and were determined to be of equal difficulty in a calibration study (Sticht and Beck, 1976). Within each modality, one passage gives a sequence of procedures for performing a task, and the other is descriptive. Passages for the two modalities are of matched length (150 and 190 words) and reading time allowed in the Reading Subtest is the same as the time it takes to read the Auding Subtest passages aloud. Times were equated so that auding and reading skills could be compared in terms of efficiency as well as accuracy.

After reading or auding each passage, examinees must answer 12 questions about each. Questions are of the constructed response type in which examinees provide a word or phrase for the answer. Constructed response questions were preferred over multiple choice because they avoid the problem of some correct answers being due to guessing, as well as the requirement for producing three or more plausible wrong choices for each question. Answers on both Auding and Reading Paragraphs subtests are given in writing. The LAB Paragraphs Test asks questions requiring the recall of facts and avoids those requiring inferential or other higher order reasoning processes. Thus, the Paragraphs Test assesses the ability to store factual information presented in spoken or written passages and to retrieve it later in response to a question. While such tasks do not represent the total range of skills involved in reading or listening comprehension, they are important to any sort of learning by language. The LAB Paragraphs Test requires about 20 minutes to administer.

The Vocabulary Test was designed to provide information as to whether or not a person's poor performance on the Paragraphs Test reflects lack of knowledge of word meanings or suffers due to the requirement to efficiently process information in connected prose format. The Vocabulary Test, unlike the Paragraphs Test, imposes no requirement for processing 150 to 190 words of prose and then responding to recall questions, all of which places additional demands on memory and attentional processes. Since the Vocabulary Test is intended to be diagnostic of performance on the Paragraphs Test, it uses the words actually in the paragraphs. This is not the situation in typical reading tests.

For the LAB Vocabulary Test, 14 words were selected from each of the auding and reading passages in the Paragraphs Test. Most (93%) of these words appear in one or more retention test items in the Paragraphs test, and 85% are found on a basic word list for adults (Mitzel, 1966). In the test, each word is presented in a stem within the context of a short phrase from the appropriate Paragraphs Test passage. Examinees must select the best synonym for this word from four alternatives. The 28

Table 1

Components of the Literacy Assessment Battery (LAB)

Test	Material	Task	Presentation Mode	Time/Rate	Total Time to Administer	Maximum Score
Paragraph:						
Auding	Two adult-oriented passages, 150 and 190 words long: FORCAST RGL* of 9th grade.	To answer 12 constructed response questions per passage involving recall of facts.	Passages & questions read aloud by examiner. (Auded by examinee)	1 minute, 15 seconds and 1 minute, 30 seconds per passage. 2 minutes and 30 seconds per 12 questions.	10	24
Reading	Same as above	Same as above	Passages & questions read silently by examinee.	Same as above	10	24
Vocabulary:						
Auding/ Reading	14 words from each passage presented in 3-4 word context from passage.	To choose correct synonym for each word from among 4 alternatives. (multiple choice)	Questions and alternatives simultaneously read and auded.	7 minutes	10	28
Reading	Same as above	Same as above	Questions and alternatives read silently.	Same as above	10	28
Decoding:						
I	Adult-oriented passage about 330 words in length: FORCAST RGL of 9th grade.	To detect and circle mismatches between words read on page and words read aloud by examiner.	Simultaneously read and auded.	100 words per minute.	3	10
II	Same as above	Same as above	Same as above	150 words per minute.	3	10
III	Same as above	Same as above	Same as above	200 words per minute.	3	10
IV	Same as above	Same as above	Same as above	250 words per minute.	3	10
					LAB TOTAL	144

*i.e., written at ninth grade reading level as measured by the FORCAST formula for assessing readability.

vocabulary words derived from the reading paragraphs are presented for reading. The two sets of words derived from the Auding Paragraphs subtest are presented for simultaneous auding and reading in the Vocabulary Test. This latter mode of presentation was chosen to permit the examinees to use auding if reading skills were too low, or reading if so desired. Although the major aim was to learn if the vocabulary knowledge was available to the examinee, not to assess auding or reading capability in this particular instance, Vocabulary Test scores can be used in combination with other information to indicate the gap between auding and reading of words and short phrases. The presentation times for each condition were established and equated by permitting the same amount of time for the reading items as it took to read the simultaneous auding and reading items aloud to examinees a single time. The Vocabulary Test takes about 20 minutes to administer.

The Decoding Test was designed to measure the efficiency with which a reading decoding task can be performed using units of connected prose. This test can also be described as evaluating whether decoding is automatic at different rates of presentation. With regard to reading, "automaticity" refers to the ability to decode print so efficiently that attention can be directed toward the processing of meaning instead of toward the decoding task. It implies that skill in decoding has become so proficient that decoding can be done without conscious attention, and attention can more effectively be directed toward getting the meaning of a message.

In the LAB Decoding Test, the examinee is required to simultaneously aud a tape and read passages at four different rates of presentation. At times, the word being spoken for auding is arranged to differ from the word being read. The examinees task is to detect and circle the mismatches between the word on the page and the word heard. Since the mismatching words in the passages fit the meaning and grammar of their sentences, they are not detectable unless the person attends to the spoken presentation at the same time he or she is reading. Rates are established by the spoken message so that the auding presentation rate sets the pace for the reading task.

The four rates, which were selected on the basis of previous work (e.g., Foulke & Sticht, 1969), were 100, 150, 200, and 250 words per minute. The four passages used in this test were all selected from the same first aid manual and all have difficulty level of 9th grade across rates. The average length of the four passages used is 332 words, with 11 mismatches per passage. The first of the 11 mismatches in each passage is considered practice so that a person is scored on 10 mismatches per passage. Mismatches occur at each rate at an average rate of one per 30 words. No mismatches are closer than 12 words apart. The Decoding Test requires about 12 minutes to administer.

ADMINISTERING THE LITERACY ASSESSMENT BATTERY

The measures of auding and reading on the LAB require that equal amounts of time be given for examinees to complete the subtests for auding and reading. To insure that this timing is comparable, and to permit the controlled acceleration of speech rate on the Reading Test, the LAB is administered by means of audio tape. The total battery can be administered in a single testing session of some 50 minutes duration.

It is important that the examiner be thoroughly familiar with the LAB testing procedure and that he or she remain present and alert during the testing so as to answer any questions, deal with unforeseen circumstances (e.g., malfunction of the audio playback equipment) and insure that examinees are following instructions (e.g., not taking notes). The examiner should read through the printed instructions in this manual, listen to the audio tape, and self-administer the test to become thoroughly familiar with the test content, procedures, and audio quality.

The LAB should be administered in a quiet room free from disturbance. Each examinee should have a sharpened pencil with a good eraser. Extra pencils should be available in case of breakage.

During the taped administration, the examiner should follow along by reading the printed instructions in this manual. Places where the examiner may be called upon to answer questions or make certain that instructions are followed are marked with double asterisks (e.g., **See that the examinees do not turn back and refer to the passage when answering the questions).

At the end of the Vocabulary Test, approximately 45 minutes after the battery has begun, the examiner will have to turn the cassette over for the Decoding Test.

To begin the test procedure prior to starting the audio tape:

Say to the Examinees:

> You are going to be given a test to measure listening and reading abilities. On some parts of the test you will have to read the material, while on some other parts you will have to listen to the material.
>
> I am going to give each of you a test booklet. Do not open it until I tell you to do so. Also, once the test has started, do not turn any page in the booklet until you are told to.

Distribute the test booklet then say:

> On the front cover, print your first and last names in the provided space. Then put today's date on the next line.

Pause: See that this information is filled out correctly, then proceed.

Say: The instructions for this test will be given over a tape recorder. Everything should be clear; however, if it is not, the person on the tape will pause for questions. If at that time you have a question raise your hand.

Start the audio playback equipment.

TAPED INSTRUCTIONS FOR ADMINISTERING THE LAB

The Examiner Says:

Look at the cover of your test booklet, and find the box where it says "Directions". Now read these directions to yourself as I read them to you.

The first part of the test measures how well you understand and remember what you read or listen to. This part of the test contains four short stories. You will read two of the stories to yourself, and listen to the other two stories. After you read or hear each story, you will answer some questions about it.

Let's try a short practice story. You will read this story to yourself. Once you have started reading, continue to read until I tell you to stop. Read quickly; you will have about one minute. Turn the page now, and begin reading.

The students will now silently read the "GI Loan" passage.

**See that the examinees re-read the passage if they finish before time is called.

STUDENT READS:

An Article About a GI Loan

Four years after his discharge from the Air Force Jack Brown went down to his bank to apply for a GI loan. He had just found a three-bedroom house on Jefferson Street that he wanted to buy for $30,000.

Before the bank could approve the loan, however, they wanted to be sure that Brown was eligible for a GI loan. So, Brown had to go to his local VA office. He supplied the VA office with two copies of his discharge papers to prove that he was a veteran. The VA office was then able to present him with a document called a "Certificate of Eligibility" to take back to the bank. Once the bank had seen this Certificate, they agreed to approve Brown's loan.

At the end of one minute,

The Examiner Says:

STOP. Turn the page. Now read the "Directions" at the top of page 2 to yourself as I read them to you.

Read and answer the questions without turning back to the story. Write your answers in the provided spaces. When answering, use the exact words that the story used. Work quickly, and don't worry about your spelling. You have one minute. Begin now.

STUDENT READS:

GI Loan Practice Questions

1. Which military service was Brown in?

   (Air Force)

2. What kind of loan did he apply for?

   (GI Loan)

3. How much did he want to buy the house for?

   ($30,000)

4. What did Brown have to supply to the VA office to prove he was a veteran?

   (discharge papers)

5. What was the title of the document that the VA office presented to Brown?

   (Certificate of Eligibility)

**See that the students do not turn back and refer to the passage when answering the questions.

At the end of one minute,

The Examiner Says:

STOP. Now let's go over the answers.

Question number 1 is: "Which military service was Brown in?" The answer is the Air Force.

Question number 2 asks: "What kind of loan did he apply for?" Brown applied for a GI loan.

Like the other questions in this test, it is important to realize that only exact answers are correct. For example, here it would not be correct to say that Brown applied for a home loan. He applied for a specific kind of loan – a GI loan.

Question number 3 was: "How much did he want to buy the house for?" The answer here is exactly $30,000.

Question number 4 asks: "What did Brown have to supply to the VA office to prove he was a veteran?" Brown had to supply his discharge papers.

Question number 5 asks: "What was the title of the document that the VA office presented to Brown?" The answer here is that Brown was given a Certificate of Eligibility.

The Examiner Says:

Now read the directions at the bottom of page 3 to yourself as I read them to you.

The first test story will be done in the same way. You will read the story, and after you are told to stop, you will turn the page and answer the questions there without turning back to the story. If you finish reading before time is called, go back over the story and re-read it. Remember, do not turn any page in this booklet until you are told to do so.

"If you have any questions at this point, please indicate this to the test administrator, so that he can stop the tape and answer your question."

**If there are any hands raised, stop the tape and answer them.

Examiner Says:

Alright, turn the page and begin reading. You have 1 minute 15 seconds.

Students will now read the "Court Case" passage.

STUDENT READS:

An Article About a Court Case

The defense called Bill Jones to the stand to testify in his own behalf against charges of kidnapping the 17 year-old son of a Chinese diplomat.

Jones, a 29 year-old contractor, is accused of abducting the boy from his east Dallas home in late November of

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1974. According to the district attorney, Jones drove the victim to the town of Davis, 30 miles away, and there locked him in a bedroom of a deserted hotel. Jones allegedly then phoned the boy's father in his Washington, D.C. office to demand two million dollars in ransom.

In his testimony, Jones pleaded innocent to the charge. Even though he had no witnesses, Jones claimed that he was in Los Angeles at the time of the kidnapping. He said that he had driven there alone on November 23rd from his office in Salt Lake City to inspect building sites for his construction company.

At the end of 1 minute 15 seconds,

The Examiner Says:

STOP. Turn the page and answer the questions. Remember, DO NOT TURN BACK. You have 2 minutes 30 seconds. Begin now.

**Discourage dawdling over any particular question by telling examinees to try answering the next question. See that the examinees do not refer back to the "Court Case" passage.

STUDENT READS:

Court Case Questions

1. What did Jones take the stand for?
2. How old was the kidnapped boy?
3. Whose son was Jones accused of kidnapping?
4. What city was the boy abducted from?
5. What was the accused man's job with the construction company?
6. How far away was Davis from the victim's home?
7. What type of building was the boy locked in?
8. How did Jones allegedly get in touch with the boy's father?
9. How much ransom was Jones supposed to have demanded?
10. How many witnesses did Jones have to prove that he was innocent?
11. Where did Jones claim that he was at the time of the kidnapping?
12. What did Jones go there to inspect?

At the end of 2 minutes 30 seconds,

The Examiner Says:

STOP. Turn the page. This completes the first story.

Now read the directions on the top of page 6 to yourself as I read them to you.

You will now listen while I read the next story to you. Listen carefully, because I will read it to you only ONCE. After it is read, I will ask some questions about it. DO NOT take any notes while you listen to the story.

The Examiner Says:

Ready?

An Article About a Fire Drill

In case of a fire drill, all the people working in the maintenance building should assemble out in the courtyard area under the radio tower.

When the fire bell sounds, all workers should leave their tools right where they are and walk—not run—from their workshops to the green stairway in the maintenance building. At the bottom of the green stairway, they should turn right and then walk straight ahead to the courtyard 100 yards away. They should go across the courtyard, past the tennis courts there, and assemble beneath the radio tower located on the far side of the tennis courts.

All workers should wait below the tower until they hear three short blasts of the fire horn. The horn signals "all clear", and at that time, the building Fire Marshall will lead the workers back to the west entrance of the building. All workers should enter the building in an orderly manner and report to the pipe shop.

Listen to the questions I will read now, and write their answers on your answer sheet. Listen closely, because these questions will be read only once.

The Examiner Says:

Fire Drill Questions

1. What building was this fire drill plan for?
2. What sound signals the start of a fire drill?
3. What should the workers leave in the building during the fire drill?

4. What is the color of the stairway used to leave the building?
5. In what direction do the workers go after reaching the bottom of the stairway?
6. How far away is the courtyard from the building stairway?
7. What sport was mentioned in the article?
8. What do the workers assemble beneath during the fire drill?
9. How many blasts of the fire horn signal the end of the fire drill?
10. Who leads the workers back to the building?
11. Which entrance is used after the fire drill?
12. Where do the workers report to after the fire drill?

After having read the last "Fire Drill" question,

The Examiner Says:

STOP. For the third story, you will again read the material to yourself. Remember, continue to read until told to stop. You have 1 minute 30 seconds this time. Turn the page now and begin reading.

STUDENT READS:

An Article About a New Sport

A new sport called fireball was recently originated by Ocean College.

Like many sports, fireball has two opposing teams. The object of the game is to get a ball into the opposing team's goal-hole. The ball, called a "meteor", is about the size of a grapefruit, and the goal-hole is a one-foot deep hole in the ground that has a diameter of 10 inches. The game is played outdoors on a diamond-shaped grass field, with a lone goal-hole at the north and south corners of the field.

There are eight players on each team, two of which are usually assigned to guard their own goal-hole. The other six players on the team try to move the ball downfield and into the opposite goal-hole. They must always pass the ball, for if it touches the ground beyond a red penalty line around the goal-hole, the team loses possession of it. Each goal is worth four points when it stays in the hole, but three points if it bounces out. No substitutions for players are allowed during the game, and the only protective equipment worn consists of steel-tipped shoes.

At the end of 1 minute 30 seconds,

The Examiner Says:

> STOP. Turn the page and answer the questions. Remember, DO NOT TURN BACK. You have 2 minutes 30 seconds. Begin now.

**Again discourage dawdling over any particular item, and see that the students do not turn back to the "New Sport" passage.

STUDENT READS

New Sport Questions

1. Where was the sport originated?
2. What is the ball called?
3. What is the ball about the same size as?
4. What is the diameter of the goal-hole?
5. What is the shape of the field that the sport is played on?
6. Where is each lone goal-hole located on the field?
7. What are two players on each team usually assigned to do?
8. How is the ball moved downfield?
9. What happens when the ball touches the ground beyond the red line?
10. How many points are scored if the ball bounces out of the goal-hole?
11. How many substitutions are allowed during the game?
12. What type of protective equipment do the players wear?

At the end of 2 minutes 30 seconds

The Examiner Says:

> STOP. Turn the page. For the last story, you will again listen to the material. Remember to listen closely, because I will read it only ONCE. DO NOT take notes.

**Again, be observant of the fact that some students may try to take notes.

The Examiner Says:

Ready?

An Article About Truck Driving

Nowadays, because of the slower national speed limit of 55 miles per hour, independent truck drivers are finding it difficult to earn a profitable living.

In an attempt to make quicker time on a haul, though, many of these independent truckers have developed a system for driving over the speed limit without having to fear arrest. This system has two parts: the use of citizen band radio (or CBs), and the use of convoys of trucks.

An example of this system is currently being used in Kansas. Truckers on Highway 8, between Newport and Roseville to the north, begin a haul by organizing convoys of six trucks. After they start, they spread out with nearly half-a-mile between trucks, and increase their speed to 75 miles per hour. The lead truck, called the scout, acts as a look-out for the highway patrol. He's especially careful to watch onramps and overpasses. The final truck at the rear of the convoy, called the guard, does the same thing. The CBs, when tuned to channel 17, are used to communicate between trucks, and when a patrolman appears, either the lead or rear truck alerts the others to slow down.

Now listen to the questions, and write your answers on the answer sheet. Listen closely; I will read them only once.

The Examiner Says:

Truck Driving Questions

1. What type of truckers was the article about?
2. What makes it now hard for certain truckers to earn a profitable living?
3. What didn't the truckers have to fear when they used the CB system?
4. What state was mentioned in the article?
5. On what highway was the CB system in use?
6. In what direction is Roseville from Newport?
7. What did the truckers organize together in?
8. After the trucks spread out, how much distance was between them?

9. What is the lead truck called?
10. Besides onramps, what areas does the last truck especially watch?
11. What is the final truck called?
12. When communicating, what channel were the CBs tuned to?

After reading the last "Truck Driving" question

The Examiner Says:

STOP. Turn the page. This completes the first part of the test.

Pause.

The Examiner Says:

Find the box labeled "Directions" at the top of page 10, and read these directions to yourself as I read them to you.

The next part is a vocabulary test. In this part of the test, you are to choose a word which is closest in meaning to another word.

Let's try two practice items. You are to read along with me as I read you a short phrase in which one word is underlined. Then, you will select a word which is closest in meaning to the underlined word as it is used in that phrase.

Each item has four choices; only one of which is correct.

You are to circle the answer that you choose.

Now read along with me as I read the items to you.

The Examiner Says:

Number 1: "drive in the center lane". Center is closest in meaning to:

a) left
b) right
c) middle
d) outside

Pause

The correct answer is "c", or "middle." Make sure that you circle the letter "c" or the word "middle" in your booklet.

Now look at item Number 2. Read along with me: "a three bedroom house for sale"; "furniture", "trailer", "section", "building".

Pause.

The correct answer is "building". So circle the letter "b" or the word "building" in your booklet.

Alright, when taking this part of the test, select an answer only when you are reasonably sure that that answer is correct. Do not guess blindly if you have absolutely no idea what the right answer is.

Remember to listen and follow along with me as I read each item. Listen closely, because I will read each item only one time. Again, circle the letter of the word, or the word, which is closest in meaning to ONLY the underlined word.

Are there any questions?

Pause.

**If there are any questions stop the tape and answer them.

The Examiner Says:

Alright, turn the page, and let's begin.

1. "back to the west entrance of the building"
   a) ceiling b) exit c) wall d) entry

2. "in case of a fire drill"
   a) rescue b) exercise c) instrument d) warning

3. "past the tennis courts"
   a) trial b) game c) supreme d) prize

4. "in an orderly manner"
   a) way b) race c) start d) push

5. "to the green stairway"
   a) steps b) patch c) hallway d) rooms

6. "working in the maintenance building"
   a) food b) safety c) repair d) patrol

7. "beneath the radio tower"
   a) truck b) wires c) structure d) equipment

8. "when the fire bell sounds"
   a) stops b) rings c) arrives d) falls

9. "straight ahead to the courtyard"
   a) wide walkway b) long tunnel c) escape route d) enclosed space

10. "and report to the pipe shop"
   a) below b) go c) travel d) hide

11. "should assemble out in the courtyard"
   a) follow b) march c) meet d) pass

12. "three short blasts of the fire horn"
   a) jumps b) pictures c) blows d) letters

13. "at the bottom of the green stairway"
   a) lowest b) building c) middle d) corner

14. "the horn signals 'all clear' "
   a) needs b) sings c) causes d) tells

15. "the lead truck"
   a) front b) back c) metal d) color

16. "without having to fear arrest"
   a) bail b) pain c) afraid d) danger

17. "difficult to earn a profitable living"
   a) be on welfare b) make money c) buy a house d) retire

18. "they spread out with nearly half-a-mile"
   a) move apart b) move outdoors c) speed up d) send away

19. "when tuned to channel 17"
   a) sent b) called c) played d) set

20. "developed a system for driving"
   a) vehicle b) method c) concern d) road

21. "are used to communicate between trucks"
   a) drive b) talk c) deliver d) pay

22. "the use of citizen band radios"
   a) government b) military c) civilian d) official

23. "make quicker time on a haul"
a) detour b) transport c) clock d) lift

24. "the use of convoys of trucks"
a) containers b) shipments c) rigs d) groups

25. "independent truck drivers are finding it difficult"
a) poor persons b) union member c) self-employed d) slow driving

26. "he's especially careful to watch onramps"
a) immediately b) particularly c) generally d) occasionally

27. "when tuned to channel 17"
a) highway b) station c) tractor d) message

28. "begin a haul by organizing convoys"
a) installing b) striking c) forming d) solving

About 5 seconds after the last item.

The Examiner Says:

STOP. Turn the page and silently read the "Directions" there along with me.

Your task in the next vocabulary part of the test is the same as in this last part—except that YOU will read all the items YOURSELF. I will not read the items to you this time.

Again, do not make blind guesses. Pick an answer only when you are reasonably sure that it is right. You have 7 minutes to work on this part. Begin now.

STUDENT READS:

1. "to inspect building sites"
a) show b) examine c) measure d) buy

2. "Jones allegedly then phoned the boy's father"
a) quickly b) actually c) supposedly d) unknowingly

3. "at the time of the kidnapping"
a) robbery b) murder c) seize d) training

(Continued)

(Continued)

4. "a bedroom of a deserted hotel"
   a) empty b) expensive c) modern d) cheap

5. "Jones is accused of abducting the boy"
   a) counted b) claimed c) captured d) asked

6. "Jones pleaded innocent to the charge"
   a) guilty b) not guilty c) no contest d) insanity

7. "In his testimony, Jones pleaded innocent"
   a) prison b) statement c) crowd d) treatment

8. "accused of abducting the boy"
   a) leaving b) finding c) taking d) losing

9. "to demand two million dollars"
   a) give b) keep c) hide d) ask

10. "Jones drove the victim to the town"
    a) kidnapper b) hostage c) accomplice d) attorney

11. "to inspect building sites for his construction company"
    a) permits b) locations c) lumber d) workers

12. "to testify in his own behalf"
    a) interest b) home c) company d) plan

13. "Jones claimed that he was in Los Angeles"
    a) forgot b) denied c) said d) lied

14. "Jones, a 29 year-old contractor"
    a) mechanic b) bank teller c) builder d) artist

15. "only protective equipment worn"
    a) medicine b) material c) courage d) cleaner

16. "no substitutions for players are allowed"
    a) penalties b) partners c) rest-periods d) replacements

17. "is about the size of a grapefruit"
    a) color b) bigness c) weight d) shape

18. "touches the ground beyond a red penalty line"
    a) past b) upon c) under d) side

(Continued)

(Continued)

19. "was recently originated by Ocean College"
    a) banned b) legalized c) started d) proved

20. "a new sport called fireball"
    a) recipe b) content c) action d) toy

21. "has a diameter of 10 inches"
    a) width b) weight c) speed d) depth

22. "two of which are assigned to guard the goal-hole"
    a) condemned b) delighted c) honored d) appointed

23. "with a lone goal-hole at the north and south corners"
    a) open b) empty c) single d) hidden

24. "fireball has two opposing teams"
    a) resisting b) surviving c) supporting d) opening

25. "no substitutions for players are allowed"
    a) involved b) treated c) permitted d) scored

26. "the team loses possession of it"
    a) exchange b) score c) ownership d) delivery

27. "move the ball downfield"
    a) shift a gear b) toward a goal c) later time d) new place

28. "three points if it bounces out"
    a) bottoms b) extends c) grounds d) rebounds

At the end of 7 minutes

The Examiner Says:

STOP. Turn the page. This completes the vocabulary part of the test.

TAPE CHANGE FOR READING TEST

It is necessary to turn the cassette over to administer the Decoding Test. If desired, you may allow the examinees a short rest period. However, the length of the test battery does not really demand a test break. If one is furnished, make sure that the examinees do not turn back to the previous two tests.

DECODING EFFICIENCY TEST

The Examiner Says:

Look at the box labeled "Directions" at the top of Page 15 and read these directions to yourself as I read them to you.

The last part of this test contains four reading passages. Each passage has been tape recorded and will be read to you. Your task is to read along with the recording of each passage. That is, you will follow along with the voice as it reads the passages to you.

As you silently read along with the tape, you will sometimes see a word on the page which is different from a word that you hear. When you come across a word you see which does not match the word you hear, you should circle that word.

Look at the sample sentence below. Now silently read that sentence along with me:

"He drove down the street toward the stop sign."

Notice that the word "road" is circled. When you listened, you heard me say "street" – NOT "road". So in this case, you would have circled the word "road" because it was not the same word that you heard.

Turn the page.

Now look at the practice passage below entitled "Earthquakes", and get ready to read along with the tape recorded voice. This time, YOU circle the words on the page which do not match the ones that you hear. Quickly circle the words which do not match and catch up with the voice, because the tape will not stop until the end of the passage.

STUDENT READS:

Practice Passage: Earthquakes

Earthquakes can be dangerous. However, an individual can lessen their danger by learning what to do in case of one. event*

Depending upon where you are during an earthquake, there are certain things to know. Above all, though, you should stay calm. Think through the consequences of any action you take. Try to calm and reassure others. remain

If indoors, watch for falling plaster, light fixtures, and other objects. Try to get under a strong table or bed, or stand in a strong doorway. Usually it is best not to run outside. desk

*NOTE: The "mismatch" words are indicated only in this Examiner's Manual; the students are provided no cues as to their location.

In this passage, there were three words on the page which did not match those you heard on the tape. You should have circled the words: "case" on line 2, "stay" on line 4, and "table" on line 7.

We will now start the actual test. The words that you need to circle will NOT be words that rhyme with each other; for example, you will not hear "fair" and see "stair", or hear "a" and see "the".

Remember to circle ONLY the single words which do not match—do NOT circle an entire line. Also, as soon as you circle a word, quickly catch up with the tape and continue reading.

Are there any questions?

**If there are any questions stop the tape and answer them.

The Examiner Says:

Alright, turn the page, and get ready for Passage One. This passage will be read at about the same speed as the practice passage was.

**While the "lead" on the tape recorder is running make sure that the examinees have their booklets open to Passage One.

**During the decoding test there should be enough time between passages to check that students are on the proper page.

STUDENT READS:

1. First Aid and the Four Life-Saver Steps

Someday you may save someone's life--possibly your own--if you know how to give first aid. You have heard (seen) similar statements many times before, but don't take such statements lightly.

A finger lost, a leg lost, a life lost--because immediate, proper treatment was not given. Then it's too late for first aid. The finger and leg cannot be restored, and life cannot be restored to the body.

As you should (may) know, first aid refers to the treatment given the sick and injured before trained individuals can administer regular (special) medical treatment. Personnel in major medical services have the finest medical equipment available, and they are trained in the most (fine) modern methods of saving lives and easing pain. But they can't be everywhere at once, so in an emergency you may have to depend upon your own knowledge of first aid.

The good first-aider deals with the whole (entire) situation--the person as well as the injury. When giving first aid, a person who lacks sufficient knowledge (ability) could possibly cause even further injury to an injured person. A person causing such injuries could be held liable in a court of law. Anyone that attempts to assist (help) another must use care and skill in performing first aid.

In practicing first aid, it is just as important to know what not to do as it is to know (learn) what to do. Keep calm, use first aid measures, and seek medical help as soon as possible. Never attempt treatment that is beyond your skill, and never (don't) move an injured person unless it is absolutely necessary.

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To treat an injured person, you should carry out what is known as the four life-saver steps. These steps are: assure breathing, stop the bleeding, cover protect the wound, and prevent or treat shock. You should memorize these four life-saver steps, and learn the simple methods of carrying them out. Prompt and proper correct first aid not only speeds healing, but as said before, may save a life.

Now, let's consider these four steps separately.

The Examiner Says:

STOP. This completes Passage One. We will now go to Passage Two. The speed of the tape for this passage will be a little faster than that of the last passage. Turn the page and get ready.

STUDENT READS:

2. Life-Saver Step One

Always make sure that a victim is breathing properly, especially if he has been hurt injured in the face, neck, or chest, or if his chest has been compressed by weights such as debris or beams. This measure is extremely important. Many deaths occur result from breathing difficulties.

If a victim wounded in the face, neck, or chest is having difficulty in getting enough air, your best plan move is to get him to where he can receive medical attention quickly. It may be best to transport him lying on his stomach rather than his back. Consider all his injuries in deciding what manner position to carry him in. Use good judgment.

If a victim has stopped breathing completely, give artificial respiration immediately. Death occurs quickly after once breathing has stopped, so immediate rescue and treatment of persons whose chest movements are impaired is essential. Incurable brain damage results from the lack of oxygen for more than four minutes.

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The most important thing to remember, though, in giving artificial respiration is to begin immediately. Don't waste time moving the patient victim to the ideal location, and don't wait for mechanical equipment.

Another important consideration of artificial respiration is to make sure that the air passageway is open. If there is an obstruction, air cannot enter the mouth lungs no matter what type of respiration method you use. The air passageway of an unconscious victim is often usually blocked to some degree.

There are three main causes for obstruction of the air passageway. The first is foreign matter in the mouth or throat, such as broken false teeth or liquids. The second is relaxation of the jaw. The tongue is attached to the jaw in such a way manner that it could fall backward and block the throat. This is commonly called "swallowing the tongue." The third is the position of the neck. When the neck is bent forward so that the head chin is down close to the chest, there is a tendency for the throat to become kinked and block the passage of air.

The Examiner Says:

STOP. This completes Passage Two. We will now go on to Passage Three. The speed of the tape for this passage will be a little faster than that of the last passage. Turn the page and get ready.

STUDENT READS:

3. Life-Saver Step Two

Uncontrolled bleeding may cause or increase shock, and may finally result in death. To stop bleeding, first apply pressure to the wound with a bandage dressing, or, if necessary, with some substitute, such as a parachute or undershirt. Be sure certain to use clean articles if possible. Place the open dressing against the wound and apply firm pressure. Continue pressure

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as long as needed. Use an additional dressing to protect cover the wound when it is necessary. Wrap the tails of the dressing around the wounded limb part and tie the ends to hold the dressing firmly against the wound. If the pressure of the bandage is insufficient to control the bleeding, continue to apply hand pressure.

If the wound is on an arm or leg and if bleeding continues, place the patient on his side back with the wounded arm or leg raised up. In this position, the blood does not flow into the wounded limb so quickly, and thus bleeding from the injury wound is slowed. The bleeding is slowed, not stopped, by raising the arm or leg, so you still have to use the dressing and pressure.

Do not, however, raise the limb if you think suspect that the bone is broken. Moving a broken arm or leg is dangerous, since it can result in further injury to the patient and may increase shock.

You can often reduce or stop bleeding by applying hand or finger pressure at certain various points on a patient's body. The pressure points in the groin and neck are particularly important. If the wound is very deep high on the leg, use the pressure points in the groin. Use a neck pressure point when the casualty has a head freely bleeding scalp wound. The neck pressure points, however, should only be used as a last resort—when other methods of stopping bleeding have failed.

Do not apply pressure to both neck points at the same time. To do so would decrease severely reduce the blood supply to the brain, causing unconsciousness and then death.

The Examiner Says:

STOP. This completes Passage Three. We will now go to Passage Four. The speed of the tape for this passage will be a little faster than that of the last passage. Turn the page and get ready.

STUDENT READS:

4. Life-Saver Steps Three and Four

Protecting a wound from infection and from further injury is the next third life-saver step. You should, of course, keep this important first aid measure in mind throughout the treatment of all casualties.

A dressing held in place by a bandage not only controls bleeding, but also can helps protect the wound from harmful germs and foreign matter. When applying the dressing, keep your hands off the wound. Make sure that the dressing is free from dirt and germs, and do not touch the part side of the dressing that goes next to the wound. The best way to remove clothing from a wound is by tearing or cutting the material clothing away. Don't pull clothing over the wounded area, for this could worsen the wound and increase the chance danger of infection.

Remember, if bleeding is severe, immediately take measures to stop the bleeding; protect a patient from disease infection and further injury by applying bandages and dressings; and prevent or treat shock in all cases of wounded persons.

Although treatment of shock is listed as the fourth of the life-saver steps, you should actually begin treating for shock at the same time that you stop the bleeding. Always treat an injury victim for shock, regardless of what symptoms occ... You begin by keeping calm, and if possible, by keeping the patient from seeing the wound. By reassuring the patient and by keeping him from seeing the wound, you reduce lessen the chances of his falling into a state of severe shock.

A person in shock may tremble and appear nervous

A person in shock may tremble and appear nervous. His pulse will become rapid but weak. He may become very quite pale and wet with sweat. He may gap for air, and he may become unconscious.

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To prevent or treat shock, make the patient comfortable. Remove any bulky weight items the patient has been carrying, and loosen his belt and clothes. Handle life him gently, and do not move him more than is absolutely necessary. Use a blanket, coat, or poncho to keep him from becoming chilled or cold.

The Examiner Says:

STOP. Close your booklets. This completes the test.

****Immediately collect all the test booklets.**

Be sure to run the second side of the tape all the way to the end so that the first side will be ready to play from the beginning.

INSTRUCTIONS FOR SCORING THE LAB

All scoring is done by hand.

PARAGRAPHS TEST

Two raw score totals are to be derived from the immediate retention tests: one from the two reading passages, and one from the two auding passages. A single Paragraphs Test: Reading raw score is obtained by summing the total number of correct items on the "Court Case" and "New Sport" retention tests, while a single Paragraphs Test: Auding raw score is obtained by summing the total number of correct items on the "Fire Drill" and "Truck Driving" retention tests.

VOCABULARY TEST

Again, two raw score totals are to be derived: one from the first set of 28 vocabulary items (simultaneous auding and reading), and one from the second set of 28 vocabulary items (reading alone). A single Vocabulary Test: Auding/Reading raw score is obtained by summing the total number of correct vocabulary items from the "Fire Drill" and "Truck Driving" passages, while a single Vocabulary Test: Reading raw score is obtained by summing the total number of correct vocabulary items from the "Court Case" and "New Sport" passages.

DECODING TEST

Each of the four Decoding Test passages contains 11 mismatch items. The first mismatch in each passage is considered a warm-up item, and is not to be scored. The remaining 10 mismatches in each passage constitute test items; a raw score is derived by totaling the number of correctly circled mismatch words in each passage. Thus, a separate raw score is to be obtained for each of four passages (and/or rates of presentation). A single, combined score is also to be derived by summing the total number of correct items across all passages.

Listed below are the scoring rules and correct or acceptable answers for each test in the Battery. Once the raw scores have been obtained, they can be converted into percentiles or reading grade level equivalents by using the conversion tables in the subsequent section.

CORRECT RESPONSES TO LAB PARAGRAPHS SUBTEST

The following are the acceptable correct responses to the Paragraphs Test immediate retention items. Generally rigid or strict scoring rules are established here, because as a result of intending to measure the efficiency of the storage and retrieval of factual information, only verbatim responses are sought. This is a test of recall of factual verbatim information, and as a result, only minimal leeway is permitted in scoring the items.

Disregard misspellings when scoring; proper abbreviations are acceptable.

READING PASSAGES

"Court Case"

1. testify in own behalf; in own behalf; his own defense
2. 17 years
3. Chinese diplomat; diplomat
4. Dallas
5. contractor
6. 30 miles
7. deserted hotel; hotel
8. by phone; telephone
9. two million dollars
10. none
11. Los Angeles, LA
12. building sites

"New Sport"

1. Ocean College (both words)
2. metsor
3. grapefruit
4. 10 inches
5. diamond-shaped; diamond
6. north and south corners; corners
7. guard goal-hole; guard goal
8. by passing
9. lose possession; loss of ball
10. three
11. none
12. steel-tipped shoes; steel-toed shoes; steel-pointed shoes

AUDING PASSAGES

"Fire Drill"

1. maintenance
2. bell
3. tools
4. green
5. right
6. 100 yards
7. tennis; tennis courts
8. radio tower; tower
9. three
10. fire marshall
11. west
12. pipe shop; pipe room

"Truck Driving"

1. independent
2. slower speed limit; 55 mph
3. arrest; highway patrol; speeding tickets; patrolmen
4. Kansas
5. eight
6. north
7. convoys
8. one-half mile; half-a-mile
9. scout
10. overpasses
11. guard
12. 17

CORRECT RESPONSES TO LAB VOCABULARY SUBTEST

All items with multiple responses are incorrect.

AUDING AND READING		READING ALONE	
"Fire Drill"	"Truck Driving"	"Court Case"	"New Sport"
1. D	15. A	1. D	15. B
2. B	16. C	2. C	16. D
3. B	17. B	3. C	17. B
4. A	18. A	4. A	18. A
5. A	19. D	5. B	19. C
6. C	20. B	6. B	20. B
7. C	21. B	7. B	21. A
8. B	22. C	8. C	22. D
9. D	23. B	9. D	23. C
10. B	24. D	10. B	24. A
11. C	25. C	11. B	25. C
12. C	26. B	12. A	26. C
13. A	27. B	13. C	27. B
14. D	28. C	14. C	28. D

CORRECT RESPONSES TO LAB DECODING SUBTESTS

Scoring Rules:

(a) The correct mismatch word must be circled, underlined, or crossed out.

(b) The student's mark must be on the mismatch word; partial overlapping with an immediately adjacent word is permitted, although if the mark exceeds beyond an adjacent word (e.g., an entire phrase, including the correct mismatch word, is circled) that item is scored incorrect.

(c) Errors of commission (i.e., when non-mismatch words are marked) are disregarded, and do not affect the scoring.

(d) Remember that the first mismatch is not scored.

1. FIRST AID AND THE FOUR LIFE-SAVER STEPS[1]

Someday you may save someone's life—possibly your own—if you know how to give first aid. You have heard similar statements many times before, but don't take such statements lightly.

A finger lost, a leg lost, a life lost—because immediate, proper treatment was not given. Then it's too late for first aid. The finger and leg cannot be restored, and life cannot be restored to the body.

As you should know, first aid refers to the treatment given the sick and injured before trained individuals can administer regular medical treatment. Personnel in major medical services have the finest medical equipment available, and they are trained in the most modern methods of saving lives and easing pain. But they can't be everywhere at once, so in an emergency you may have to depend upon your own knowledge of first aid.

The good first-aider deals with the whole situation—the person as well as the injury. When giving first aid, a person who lacks sufficient knowledge could possibly cause even further injury to an injured person. A person causing such injuries could be held liable in a court of law. Anyone that attempts to assist another must use care and skill in performing first aid.

In practicing first aid, it is just as important to know what not to do as it is to know what to do. Keep calm, use first aid measures, and seek medical help as soon as possible. Never attempt treatment that is beyond your skill, and never move an injured person unless it is absolutely necessary.

To treat an injured person, you should carry out what is known as the four life-saver steps. These steps are: assure breathing, stop the bleeding, protect the wound, and prevent or treat shock. You should memorize these four life-saver steps, and learn the simple methods of carrying them out. Prompt and correct first aid not only speeds healing, but as said before, may save a life. Now, let's consider these four steps separately.

[1]These keys exclude the practice item from each passage.

2. LIFE-SAVER STEP ONE

DO NOT SCORE

Always make sure that a victim is breathing properly, especially if he has been injured in the face, neck, or chest, or if his chest has been compressed by weights such as debris or beams. This measure is extremely important. Many deaths result from breathing difficulties.

If a victim wounded in the face, neck, or chest is having difficulty in getting enough air, your best move is to get him to where he can receive medical attention quickly. It may be best to transport him lying on his stomach rather than on his back. Consider all his injuries in deciding what position to carry him in. Use good judgment.

If a victim has stopped breathing completely, give artificial respiration immediately. Death occurs quickly once breathing has stopped, so immediate rescue and treatment of persons whose chest movements are impaired is essential. Incurable brain damage results from the lack of oxygen for more than four minutes.

The most important thing to remember, though, in giving artificial respiration is to begin immediately. Don't waste time moving the victim to the ideal location, and don't wait for mechanical equipment.

Another important consideration of artificial respiration is to make sure that the air passageway is open. If there is an obstruction, air cannot enter the lungs no matter what type of respiration method you use. The air passageway of an unconscious victim is usually blocked to some degree.

There are three main causes for obstruction of the air passageway. The first is foreign matter in the mouth or throat, such as false teeth or liquids. The second is relaxation of the jaw. The tongue is attached to the jaw in such a manner that it could fall backward and block the throat. This is commonly called "swallowing the tongue". The third is the position of the neck. When the neck is bent forward so that the chin is down close to the chest, there is a tendency for the throat to become kinked and block the passage of air.

3. LIFE-SAVER STEP TWO

Uncontrolled bleeding may cause or increase shock, and may finally result in death. To stop bleeding, first apply pressure to the wound with a dressing, DO NOT SCORE or, if necessary, with some substitute such as a parachute or undershirt. Be certain to use clean articles if possible. Place the open dressing against the wound and apply firm pressure. Continue pressure as long as needed. Use an additional dressing to cover the wound when it is necessary. Wrap the tails of the dressing around the wounded part and tie the ends to hold the dressing firmly against the wound. If the pressure of the bandage is insufficient to control the bleeding, continue to apply hand pressure.

If the wound is on an arm or leg and if bleeding continues, place the patient on his back with the wounded arm or leg raised up. In this position the blood does not flow into the wounded limb so quickly, and thus bleeding from the wound is slowed. The bleeding is slowed, not stopped, by raising the arm or leg, so you still have to use the dressing and pressure.

Do not, however, raise the limb if you suspect that the bone is broken. Moving a broken arm or leg is dangerous since it can result in further injury to the patient and may increase shock.

You can often reduce or stop bleeding by applying hand or finger pressure at various points on a patient's body. The pressure points in the groin and neck are particularly important. If the wound is very high on the leg, use the pressure points in the groin. Use a neck pressure point when the casualty has a freely bleeding scalp wound. The neck pressure points, however, should only be used as a last resort—when other methods of stopping bleeding have failed.

Do not apply pressure to both neck points at the same time. To do so would severely reduce the blood supply to the brain, causing unconsciousness and then death.

4. LIFE-SAVER STEPS THREE AND FOUR

DO NOT SCORE

Protecting a wound from infection and from further injury is the third life-saver step. You should, of course, keep this important first aid measure in mind throughout the treatment of all casualties.

A dressing held in place by a bandage not only controls bleeding, but also helps protect the wound from harmful germs and foreign matter. When applying the dressing, keep your hands off the wound. Make sure that the dressing is free from dirt and germs, and do not touch the side of the dressing that goes next to the wound. The best way to remove clothing from a wound is by tearing or cutting the clothing away. Don't pull clothing over the wounded area, for this could worsen the wound and increase the danger of infection.

Remember, if bleeding is severe, immediately take measures to stop the bleeding; protect a patient from infection and further injury by applying bandages and dressings; and prevent or treat shock in all cases of wounded persons.

Although treatment of shock is listed as the fourth of the life-saver steps, you actually begin treating for shock at the same time that you stop the bleeding. Always treat an injury victim for shock, regardless of what symptoms occur. You begin by keeping calm, and if possible, by keeping the patient from seeing the wound. By reassuring the patient and by keeping him from seeing the wound, you lessen the chances of his falling into a state of severe shock.

A person in shock may tremble and appear nervous. His pulse will become rapid but weak. He may become quite pale and wet with sweat. He may gasp for air, and he may become unconscious.

To prevent or treat shock, make the patient comfortable. Remove any bulky items the patient has been carrying, and loosen his belt and clothes. Handle him gently, and do not move him more than is absolutely necessary. Use a blanket, coat, or poncho to keep him from becoming chilled or cold.

NORMATIVE DATA FOR THE LAB

The LAB raw scores for the Paragraph, Vocabulary, and Decoding subtests are useful for comparing a person's scores within each of these subtests. That is, a person's Auding and Reading Paragraph raw scores provide an indication of whether performance was better by auding than reading. Similarly, raw scores on the Vocabulary and Decoding subtests can be directly compared.

However, comparison of raw scores across Paragraph, Vocabulary, and Decoding subtests is not meaningful because the number of items in each subtest differs and the tests are assessing different skills. To make meaningful comparisons across subtests possible, several tables have been prepared which permit LAB subtest scores to be converted to percentile scores, reading grade levels, and selected aptitude scores from the Armed Services Vocational Aptitude Battery (ASVAB).

The normative data for the conversion tables for the LAB were obtained as part of a larger study (Mathews, Valentine, & Sellman; 1978) designed to provide information about the relationships between scores on subtests of the Armed Services Vocational Aptitude Battery (ASVAB) and scores on reading tests.

The data to be discussed here were obtained from a total population of 4,599 service applicants who were tested on 25 geographically dispersed Armed Forces Examining and Entrance Stations (AFEES) in spring of 1978. Applicants were administered the ASVAB as well as two of four reading tests: the LAB, the Gates-MacGinitie Reading Test Survey D (Gates & MacGinitie, 1965), the Nelson-Denny Reading Test Form C (Brown, Nelson, & Denny, 1976), and the Reading Test of the Basic Skills Assessment Battery (Educational Testing Service, 1977).

Every applicant for service who came to one of the 25 AFEESs during a six-week period in March and April 1978 was tested. The ASVAB was administered as part of the standard entrance procedure. Reading tests were administered either on the same day or the preceding evening. The two reading tests randomly selected to be given at that station were administered in counter-balanced order. The geographic locations of the AFEES concerned, the number of applicants receiving each test, and the demographic and service relevant characteristics of the population tested are described in Tables 2, 3, and 4.

Table 2

Number of Test Scores Available for Norming the LAB

Test	Total N	LAB Sample N
ASVAB	4260	2111
Gates-MacGinitie	2245	593
Nelson-Denny	2437	673
Basic Skills Assessment	1922	688

Table 3

AFEES Stations Where Tests Were Administered

Station	Total Sample N	LAB Sample N
Boston	111	111
Newark	140	-
Philadelphia	502	502
Pittsburgh	95	-
Atlanta	285	-
Jacksonville	35	35
Louisville	205	205
Montgomery	141	-
Raleigh	57	-
Richmond	92	-
Dallas	290	-
Denver	199	199
Houston	200	200
Memphis	161	-
New Orleans	218	-
Oklahoma City	197	-
San Antonio	237	237
Cincinnati	191	-
Detroit	223	223
Indianapolis	224	-
Milwaukee	103	103
Minneapolis	235	235
St. Louis	79	-
Salt Lake City	69	69
Fresno	94	94

Table 4

Demographic Characteristics of LAB Norming Population

Characteristic	Total Sample	LAB Sample
Service		
Army	1930 (44%)	963 (46%)
Navy	1086 (25%)	497 (23%)
Air Force	811 (19%)	361 (17%)
Marine Corps	537 (12%)	285 (14%)
Qualification		
Qualified	2999 (70%)	1481 (73%)
Unqualified	1277 (30%)	548 (27%)
Sex		
Male	3601 (82%)	1741 (83%)
Female	781 (18%)	365 (17%)
Race		
Black	1683 (38%)	648 (31%)
White and Other	2700 (62%)	1444 (69%)
Education		
High School Graduate	2225 (51%)	1086 (52%)
Non-Graduate	2110 (49%)	1003 (48%)

Aside from determining the percentile equivalents of LAB scores in a procedure to be described below, norming was accomplished by equating LAB scores on an equipercentile basis to scores on the Armed Forces Qualifying Test (AFQT) and General Technical (GT) composites of the ASVAB, and to reading grade levels or standard scores on the other reading tests. All AFQT and GT percentiles given in this manual are based on scores on ASVAB Forms 6 and 7, recalibrated in accordance with the correct norms developed in 1980 (OASD/MRA&L, 1980).

Tables 5 and 6 give the mean scores obtained by the LAB norming populations on tests administered. Table 7 gives these scores for the four services.

Table 5

Mean Scores on Reading Tests and ASVAB Composites for LAB Norming Sample

Test	Total Sample		LAB Sample	
	N	Mean	N	Mean
Gates-MacGinitie RGL	2245	8.5	593	8.5
Nelson-Denny RGL	2438	9.8	832	9.7
BSA Standard	1925	145.0	692	145.0
AFQT Percentile	4245	38.9	2167	34.6
GT Percentile	4261	34.3	2174	32.0

Table 6

Summary Statistics on Literacy Assessment Battery

LAB Subtest		Total LAB Sample		
		N	Mean	Standard Deviation
Paragraphs				
Auding	(out of 24)	2105	14.4 (60%)	5.4
Reading	(out of 24)	2105	15.5 (65%)	6.0
Vocabulary				
Auding/Reading	(out of 28)	2107	24.6 (88%)	4.3
Reading	(out of 28)	2107	23.4 (84%)	5.6
Decoding				
100 WPM	(out of 10)	2107	8.8 (88%)	2.2
150 WPM	(out of 10)	2107	8.2 (82%)	2.6
200 WPM	(out of 10)	2107	6.8 (68%)	3.0
250 WPM	(out of 10)	2107	4.7 (47%)	3.2
TOTAL	(out of 40)	2102	28.5 (71%)	9.7
LAB TOTAL	(out of 144)	2105	106.4 (74%)	27.4

Table 7

Descriptive Statistics on LAB Norming Population by Service and Qualification Status

Score	Qualified Army	Qualified Navy	Qualified Air Force	Qualified Marines	Total Qualified	Total Unqualified
LAB						
Paragraphs						
Auding	15.51	16.3	17.5	15.6	16.1	9.9
N =	(599)	(402)	(249)	(222)	(1480)	(545)
Reading	16.6	17.9	19.2	16.5	17.4	10.3
	(599)	(402)	(249)	(222)	(1480)	(545)
Vocabulary						
Auding/Reading	25.6	26.3	26.9	25.3	26.0	20.9
	(599)	(402)	(249)	(223)	(1481)	(546)
Reading	24.9	25.5	26.6	24.4	25.3	18.4
	(599)	(402)	(249)	(223)	(1481)	(546)
Decoding						
100 WPM	9.1	9.5	9.8	9.2	9.3	7.4
	(599)	(402)	(249)	(223)	(1481)	(546)
150 WPM	8.7	8.9	9.5	8.6	8.9	6.4
	(599)	(402)	(249)	(223)	(1481)	(546)
200 WPM	7.3	7.7	8.6	7.2	7.6	4.4
	(599)	(402)	(249)	(223)	(1481)	(546)
250 WPM	5.3	5.4	6.6	4.9	5.5	2.4
	(599)	(402)	(249)	(223)	(1481)	(546)
Total	30.3	31.4	34.4	30.0	31.3	20.6
	(597)	(402)	(249)	(222)	(1478)	(544)
LAB Total	113.0	117.5	124.6	111.8	116.0	80.0
	(599)	(402)	(249)	(222)	(1480)	(545)
Gates-MacGinitie RGL	8.8	9.8	10.3	8.9	9.4	6.1
	(561)	(436)	(317)	(145)	(1459)	(574)
Nelson-Denny RGL	9.9	10.6	11.8	10.0	10.4	8.1
	(692)	(460)	(223)	(188)	(1577)	(623)
AFQT Percentile*	49.9	55.8	60.5	54.5	53.4	13.4
	(1186)	(863)	(540)	(385)	(2987)	(1262)
GT Percentile*	57.3	66.9	70.2	59.7	61.3	13.5
	(1190)	(866)	(541)	(387)	(2997)	(1267)

*Removed ASVAB 7.

Tables 8 through 14 present data for converting LAB subtest and total raw scores into normative percentile scores, AFQT and GT percentile scores, Gates-MacGinitie and Nelson-Denny Reading Grade Level (RGL) scores and Basic Skills Assessment Standard Scores.

The first conversion for each LAB raw score given in Tables 8-14 are percentile equivalents. Percentile equivalents indicate the percentage of people in the norming population scoring at or below a given raw score. Thus, a person receiving a raw score of 17 on the LAB Auding Paragraphs Test (Table 8) has performed as well as or better than 69% of the norming population. It will be recalled that the population used to norm the LAB was composed of applicants for military service at selected AFEES in two months of 1978. Thus, it represents a sample from the manpower pool available

Table 8

Norms for Converting Auding Paragraphs Raw Scores Into Reading Grade Level Equivalents, ASVAB Composite Equivalents and Percentiles

Auding Paragraphs Raw Score	Percentile	Gates-MacGinitie RGL	Nelson Denny RGL	BSA*	AFQT Percentile	GT Percentile
0	1	2.2			1	1
1	2	2.5	6.1		3	2
2	4	2.9	6.3		4	5
3	5	3.2	6.4		5	6
4	6	3.5	6.5		6	7
5	8	3.9	6.6		7	8
6	10	4.4	6.7		8	9
7	12	4.7	6.9	100	10	10
8	15	5.0	7.0	105	11	11
9	19	5.4	7.2	112	12	13
10	23	5.8	7.3	119	13	14
11	27	6.3	7.6	126	15	16
12	33	6.9	7.8	133	18	19
13	38	7.5	8.2	142	22	22
14	45	8.2	8.7	149	27	29
15	51	9.1	9.2	153	32	35
16	59	9.9	10.0	160	41	44
17	69	10.7	11.1	165	52	55
18	76	11.1	12.2	170	50	64
19	82	11.6	13.1	172	67	70
20	89	11.7	13.9	176	78	78
21	94	11.9	14.7	179	86	84
22	97		14.9	179	91	90
23	99		15.0	181	97	95
24	99				99	99

*Basic Skills Assessment scores are standard scores.

to the military at that time. Percentile scores, indicating directly where a person's performance stands relative to this population, should be especially meaningful to military users of the LAB. Percentile equivalents are also especially appropriate for making normative comparisons among a person's scores on various subtests. This will be discussed further in the section on interpreting LAB scores.

For Tables 8 through 14, LAB scores were equated with other scores which represented an identical cumulative percentile rank for the population tested. Thus, a LAB Auding Paragraph raw score of 12 is better or equal to the score on this subtest obtained by 33 percent of the norming population. This raw score is set equal to a Gates-MacGinitie

Table 9

Norms for Converting LAB Reading Paragraphs Raw Scores Into Reading Grade Level Equivalents, ASVAB Composite Equivalents and Percentiles

Reading Paragraphs Raw Score	Percentile	Gates-MacGinitie RGL	Nelson-Denny RGL	BSA*	AFQT Percentile	GT Percentile
0	1	2.2			1	1
1	3	2.7	6.1		3	5
2	4	2.9	6.3		4	6
3	5	3.3	6.5		5	7
4	7	3.7	6.6		6	9
5	9	4.1	6.7		8	9
6	10	4.4	6.8		9	9
7	12	4.7	6.9	100	10	10
8	14	4.9	7.0	103	11	11
9	18	5.3	7.1	110	12	12
10	21	5.7	7.3	114	14	13
11	24	6.0	7.4	121	15	15
12	29	6.4	7.6	128	17	17
13	33	6.9	7.9	135	18	19
14	37	7.4	8.1	140	21	22
15	42	7.9	8.5	144	25	26
16	48	8.5	8.9	151	30	31
17	54	9.4	9.5	156	35	38
18	60	10.0	10.0	160	41	45
19	69	10.7	11.2	165	53	55
20	77	11.2	12.3	170	61	65
21	85	11.7	13.5	174	72	73
22	93	11.8	14.4	179	84	84
23	97	11.9	14.9	179	91	90
24	99		15.0	181	99	99

*Basic Skills Assessment scores are standard scores.

Reading Grade Level score of 6.9 because 33 percent of the norming population scored at or below 6.9 on the Gates-MacGinitie. Similarly, a LAB Reading Paragraph score of 12 exceeds or equals the performance of only 29 percent of the norming population and is equivalent to a Gates-MacGinitie RGL of 6.4.

Table 10

Norms for Converting LAB Auding/Reading Vocabulary Raw Scores Into Reading Grade Level Equivalents, ASVAB Composite Equivalents and Percentiles

Reading Vocabulary Raw Score	Percentile	Gates-MacGinitie RGL	Nelson-Denny RGL	BSA*	AFQT Percentile	GT Percentile
0						
1						
2						
3		2.1				
4		2.2				
5	1	2.3			1	1
6	2	2.5			2	3
7	3	2.7	6.1		3	5
8	4	2.9	6.3		4	5
9	4	3.2	6.4		4	5
10	5	3.5	6.5		5	6
11	6	3.6	6.6		5	6
12	8	3.9	6.6		7	8
13	9	4.1	6.7		8	9
14	10	4.4	6.7		9	9
15	11	4.5	6.8		10	9
16	12	4.7	6.9	100	10	10
17	13	4.8	6.9	103	11	10
18	16	5.0	7.0	105	12	11
19	17	5.2	7.1	107	12	12
20	20	5.5	7.2	114	13	14
21	23	5.8	7.3	119	15	15
22	27	6.2	7.5	126	16	16
23	32	6.8	7.8	133	18	1b
24	39	7.8	8.2	142	23	23
25	49	8.7	9.0	151	31	33
26	62	10.2	10.2	163	44	48
27	82	11.6	13.1	172	67	70
28	99	11.9	15.0	181	99	99

*Basic Skills Assessment scores are standard scores.

For the LAB subtest percentiles, norms were computed using the scores of all people who were given the LAB test, with missing and out-of-range scores eliminated. This population consisted of from 2102 to 2107 people. Since everyone receiving the LAB also took the ASVAB, the ASVAB composite (AFQT and GT) percentiles were computed with reference to this same population. The LAB and Gates-MacGinitie

Table 11

Norms for Converting LAB Reading Vocabulary Raw Scores Into Reading Grade Level Equivalents, ASVAB Composite Equivalents and Percentiles

Auding/Reading Vocabulary Raw Score	Percentile	Gates-MacGinitie RGL	Nelson-Denny RGL	BSA*	AFQT Percentile	GT Percentile
0						
1						
2						
3						
4						
5						
6						
7		2.1				
8		2.2				
9		2.2				
10	1	2.3			1	1
11	2	2.5			2	3
12	3	2.7	6.1		3	5
13	4	3.0	6.4		4	5
14	5	3.3	6.5		5	6
15	7	3.7	6.6		6	7
16	8	3.9	6.6		7	8
17	9	4.2	6.7		8	9
18	11	4.5	6.8		10	9
19	13	4.8	6.9	100	11	10
20	15	4.9	7.0	105	11	11
21	17	5.2	7.1	107	12	12
22	20	5.5	7.2	114	13	13
23	24	5.9	7.4	119	15	15
24	30	6.6	7.7	130	17	17
25	40	7.7	8.3	142	23	24
26	52	9.2	9.3	156	33	36
27	76	11.2	12.1	170	60	64
28	99	11.9	15.0	181	99	99

*Basic Skills Assessment scores are standard scores.

Table 12

Norms for Converting LAB Decoding Raw Scores Into Reading Grade Level Equivalents, ASVAB Composite Equivalents and Percentiles

Decoding Raw Score	Percentile	Gates-MacGinitie RGL	Nelson-Denny RGL	BSA*	AFQT Percentile	GT Percentile
Decoding 100 WPM						
0	2	2.8	6.1		2	3
1	3	2.9	6.3		3	5
2	4	3.2	6.4		4	5
3	5	3.3	6.5		5	6
4	6	3.6	6.5		5	7
5	8	3.9	6.6		7	8
6	10	4.5	6.7	100	8	9
7	15	4.9	7.0	105	11	11
8	23	5.8	7.3	119	15	15
9	41	7.8	8.4	144	24	25
10	99	11.9	15.0	181	99	99
Decoding 150 WPM						
0	3	2.7	6.1		3	5
1	5	3.3	6.5		5	6
2	6	3.7	6.6		5	6
3	9	4.1	6.7		7	9
4	11	4.5	6.8	100	8	9
5	14	4.8	6.9	103	11	10
6	18	5.7	7.1	110	12	12
7	24	5.9	7.1	119	15	15
8	34	7.1	8.0	135	19	20
9	56	9.6	9.6	156	37	42
10	99	11.9	15.0	181	99	99
Decoding 200 WPM						
0	5	3.3	6.5		5	6
1	8	4.1	6.7		7	8
2	13	4.5	6.9	100	9	10
3	17	5.2	7.1	107	11	11
4	23	5.8	7.3	119	15	14
5	29	6.4	7.7	128	17	17
6	37	7.4	8.1	140	21	22
7	47	8.5	8.9	151	28	30
8	63	10.2	10.1	163	45	48
9	82	11.6	13.1	172	66	70
10	99	11.9	15.0	181	99	99
Decoding 250 WPM						
0	13	4.7	6.9	100	10	10
1	22	5.8	7.3	117	14	14
2	31	6.7	7.3	130	18	18
3	40	7.7	8.3	142	24	24
4	48	8.7	9.0	151	30	32
5	58	9.8	9.9	158	39	44
6	68	10.6	10.9	165	52	54
7	75	11.2	12.1	170	60	64
8	84	11.6	13.2	174	71	73
9	93	11.9	14.5	179	84	84
10	99	11.9	15.0	181	99	99

*Basic Skills Assessment scores are standard scores.

Table 13

Norms for Converting LAB Decoding Total Scores Into Reading Grade Level Equivalents, ASVAB Composite Equivalents and Percentiles

Decoding Total Raw Score	Percentile	Gates-MacGinitie RGL	Nelson-Denny RGL	BSA*	AFQT Percentile	GT Percentile
0	1	2.3			1	1
1-2	2	2.6	6.1		3	3
3-4	4	3.0	6.2		4	6
5-6	5	3.2	6.4		5	6
7-8	6	3.6	6.5		5	7
9-10	7	3.8	6.6		6	7
11-12	9	4.1	6.6		8	9
13-14	11	4.5	6.7	100	9	10
15-16	13	4.7	6.9	103	10	10
17-18	15	5.0	7.0	105	11	11
19-20	19	5.4	7.2	112	13	13
21-22	22	5.8	7.3	117	14	14
23-24	27	6.2	7.5	126	16	16
25-26	33	6.9	7.8	135	18	19
27-28	40	7.6	8.3	142	23	24
29-30	47	8.4	8.8	151	29	30
31-32	56	9.6	9.7	158	37	42
33-34	67	10.6	10.9	165	50	53
35-36	79	11.4	12.6	172	63	67
37-38	90	11.8	14.1	176	80	79
39-40	99	11.9	15.0	181	99	99

*Basic Skills Assessment scores are standard scores.

percentile equivalences of only the subset of people taking both tests (N=593) were compared with the corresponding percentiles for the total population who had taken either test (2107)for LAB; 2245 for the Gates-MacGinitie). As no striking or systematic differences were observed, Gates-MacGinitie-LAB percentile equivalences were computed on the basis of total samples, since the larger numbers involved made these more likely to be representative of the population as a whole. A similar procedure was followed for the computation of LAB-Nelson-Denny and LAB-BSA equivalences.

A comparison of the Nelson-Denny and Gates-MacGinitie columns in the norming tables shows that RGL equivalents for the same LAB raw score can be quite

Table 14

Norms for Converting LAB Total Raw Scores Into Reading Grade Level Equivalents, ASVAB Composite Equivalents and Percentiles

LAB Total Raw Score	Percentile	Gates-MacGinitie RGL	Nelson-Denny RGL	BSA*	AFQT Percentile	GT Percentile
0-20	1	2.1				
21-25	1	2.2			1	1
26-30	2	2.4			2	2
31-35	2	2.6	6.1		3	2
36-40	3	2.8	6.3		3	5
41-45	4	3.1	6.4		4	5
46-50	6	3.5	6.5		5	6
51-55	7	3.8	6.6		6	7
56-60	8	4.1	6.6		7	8
61-65	10	4.3	6.7		9	9
66-70	11	4.6	6.8		10	10
71-75	13	4.8	6.9	100	11	10
76-80	15	5.0	7.0	105	11	11
81-85	18	5.2	7.1	110	13	12
86-90	22	5.8	7.2	117	14	14
91-95	25	5.9	7.4	121	15	16
96-100	29	6.5	7.7	128	17	17
101-105	35	7.1	8.0	137	19	21
106-110	42	7.9	8.5	144	25	26
111-115	49	8.6	8.9	151	30	32
116-120	57	9.7	9.8	158	33	43
121-125	68	10.6	10.9	165	52	54
126-130	79	11.4	12.6	172	62	67
131-135	90	11.7	14.1	176	80	79
136-140	97	11.9	15.0	179	91	90
141-144	99			181	99	99

*Basic Skills Assessment scores are standard scores.

different depending on which reading test is used. For example, in Table 9, a person who scored 8 on the LAB Reading Paragraphs Test has a Gates-MacGinitie RGL equivalent of 4.9 and a Nelson-Denny equivalent of 7.0. These levels appear to imply quite different things about what sorts of tasks this person would be likely to be able to perform. Yet, the question of what reading level this person is "really" reading at is unanswerable. The differences in the RGL equivalents of the LAB raw scores are a complex function of the differences in the tests and the populations used to norm

them. Because of these differences, the Nelson-Denny RGL does not reflect discriminations between very low scores on the LAB, and the Gates-MacGinitie does not reflect discriminations among very high scores.

Interpretation of BSA standard scores in regard to various reference populations used in norming the BSA can be obtained by reference to the BSA manual (Educational Testing Service, 1978).

AFQTand GT composite scores are expressed in percentiles based on current corrected ASVAB norms. These percentiles refer back to the World War II mobilization population, i.e., all personnel (including officers) in the services on December 31, 1944. To say that someone has a LAB score equivalent to an AFQT percentile of 50 means that, based on the LAB score, that person would be predicted to obtain an AFQT score better than 50 percent of this World War II group. This is not the same as saying he or she has performed better than 50 percent of the LAB norming population. The LAB norming data indicate that a LAB raw score estimated to be equivalent to the 50th percentile for the World War II ASVAB reference population is better than 67 percent of the LAB norming population. This reflects the fact that the LAB norming population, which does not include college educated officers, performs less well on standardized tests than did the original ASVAB norming population which, as mentioned, included both officers and enlisted personnel. The fact that the mean AFQT and GT percentiles are below 50 also reflects this fact.

Table 15 presents equivalences between Gates-MacGinitie Reading Grade Level and Reading Grade Levels on the Adult Basic Learning Examination (ABLE) Level II and III (Karsen, Madden & Gardner, 1967) and the Tests of Adult Basic Education (TABE) (CTB/McGraw-Hill, 1976). These equivalences were obtained by Grafton[1] in a 1980 study using the new ASVAB Form 8A. Varying number of military recruits from different services were used as a norming population. By finding the Gates-MacGinitie equivalent to a LAB score and then the ABLE or TABE equivalent to that Gates-MacGinitie score, one can indirectly find the ABLE or TABE equivalent of a LAB score. This additional table is included because the ABLE and TABE are in wide use by the military. However, because this is a two step procedure using two different norming populations, this procedure is subject to considerable error and should be used with caution.

As an alternative means for obtaining equivalences to LAB scores, regression equations relating LAB scores to the Gates-MacGinitie and Nelson-Denny reading tests and the AFQT are presented in Table 16. To find the predicted score on another test, substitute the appropriate numerical value of a LAB raw score in the equation for that test and perform the computation. It should be noted here that in many cases predicted scores obtained by this procedure will differ somewhat from equivalents to the same LAB score obtained from the equipercentile norming tables.

[1] Unpublished study by the U.S. Army Research Institute for the Behavioral and Social Services, Alexandria, Virginia.

Table 15

Norms for Converting Gates-MacGinitie Reading Levels to Levels on ABLE and TABE Tests

Gates-MacGinitie	ABLE	TABE
4.0	5.5	
4.1	5.6	
4.5	5.7	
4.6	5.8	
4.8	6.0	
5.1	6.2	
5.3	6.3	
5.4	6.5	
5.6	6.6	
5.7	6.7	
5.8	6.8	8.0
6.0	6.9	8.1
6.1	7.0	8.1
6.2	7.2	8.1
6.3	7.3	8.2
6.4	7.4	8.3
6.6	7.5	8.4
6.7	7.6	8.5
7.0	7.7	8.9
7.2	7.8	9.0
7.4	7.9	9.1
7.5	8.0	9.2
7.7	8.1	9.4
8.1	8.2	9.5
8.4	8.3	9.6
8.7	8.5	9.7
8.9	8.6	9.8
8.9	8.6	9.8
9.0	8.7	9.8
9.3	8.8	9.9
9.5	8.9	9.9
9.7	9.0	10.0
10.0	9.2	10.1
10.4	9.4	10.2
10.6	9.5	10.3
10.8	9.6	10.4
11.0	9.8	10.5
11.3	10.1	10.8
11.5	10.3	11.2
11.7	10.4	11.3
11.8+	10.5+	11.4+

Table 16

Regression Equations for Converting LAB Scores to Reading Grade Level on Standard Reading Tests and to AFQT Percentile

Converting LAB to Gates-MacGinitie RGL

RGL =

3.3 + .33 (Auding Paragraph Score)
2.6 + .39 (Reading Paragraph Score)
−4.3 + .52 (Auding/Reading Vocabulary Score)
−2.2 + .45 (Reading Vocabulary Score)
.69+ .88 (Decoding I Score)
2.3 + .76 (Decoding II Score)
3.8 + .72 (Decoding III Score)
5.8 + .65 (Decoding IV Score)
1.6 + .25 (Decoding Total Score)
1.6 + .10 (LAB Total Score)

Converting LAB to Nelson-Denny RGL

RGL =

5.9 + .27 (Auding Paragraph Score)
5.1 + .31 (Reading Paragraph Score)
1.9 + .32 (Auding/Reading Vocabulary Score)
3.3 + .28 (Reading Vocabulary Score
5.6 + .48 (Decoding I Score)
5.9 + .48 (Decoding II Score)
5.9 + .56 (Decoding III Score)
6.8 + .61 (Decoding IV Score)
4.8 + .17 (Decoding Total Score)
2.8 + .07 (LAB Total Score

Converting LAB to AFQT Percentile

RGL =

− 4.5 + 3.2 (Auding Paragraph Score)
− 5.0 + 3.0 (Reading Paragraph Score)
−48.1 + 3.6 (Auding/Reading Vocabulary Score)
−29.8 + 3.0 (Reading Vocabulary Score)
− 4.3 + 5.2 (Decoding I Score)
.89 + 4.9 (Decoding II Score)
5.1 + 5.4 (Decoding III Score)
15.9 + 5.5 (Decoding IV Score)
− 7.5 + 1.7 (Decoding Total Score)
−32.8 + .69 (LAB Total Score)

VALIDITY

To estimate the validity of the Literacy Assessment Battery, LAB test scores for the norming population were correlated with scores on the other reading tests and with the ASVAB composites. These correlations are presented in Table 17. Table 17 indicates that LAB scores, both total and subtest, correlate about as highly with commercial reading tests as these tests do with each other. These correlations reflect the fact that the individuals tested rank themselves quite consistently on the basis of scores on these tests. This is consistent with the idea that persons taking these various tests draw upon knowledge, language and information processing skills needed for performance on each and every one of these tests. In this sense, the LAB appears to be as valid an indicator of language and reading ability as are the standardized reading tests.

Table 17

Correlation Coefficients for LAB Raw Scores Reading Grade Levels and ASVAB Composites

	LAB Auding Para.	LAB Reading Para.	LAB A/R Vocab.	LAB Reading Vocab	Decod. 1	Decod. 2	Decod. 3	Decod. 4	Decod. Total	LAB Total	AFQT %	GT %	Gates-MacGinitie RGL	Nelson Denny RGL	BSA
LAB Auding Para.	1.00 (2105)	.748 (2105)	.685 (2105)	.678 (2105)	.481 (2109)	.515 (2109)	.603 (2105)	.579 (2105)	.628 (2100)	.828* (2105)	.629 (2007)	.653 (2015)	.744 (593)	.613 (672)	.622 (688)
LAB Reading Para.		1.00 (2105)	.719 (2105)	.762 (2106)	.619 (2109)	.674 (2109)	.728 (2105)	.684 (2105)	.769 (2100)	.906* (2105)	.684 (2007)	.714 (2015)	.804 (593)	.677 (672)	.785 (688)
LAB A/R Vocab.			1.00 (2107)	.813 (2107)	.616 (2111)	.527 (2111)	.633 (2107)	.570 (2107)	.689 (2102)	.859* (2105)	.620 (2009)	.640 (2017)	.754 (593)	.537 (673)	.662 (689)
LAB Read Vocab.				1.00 (2107)	.683 (2111)	.705 (2111)	.699 (2107)	.614 (2107)	.754 (2102)	.839* (2105)	.684 (2009)	.690 (2017)	.801 (593)	.595 (673)	.675 (689)
Decoding 1					1.00	.810 (2111)	.689 (2111)	.524 (2111)	.828* (2106)	.756* (2109)	.472 (2009)	.492 (2017)	.603 (593)	.402 (674)	.550 (692)
Decoding 2						1.00	.792 (2111)	.626 (2111)	.900* (2106)	.811* (2109)	.552 (2009)	.547 (2017)	.644 (593)	.463 (674)	.626 (692)
Decoding 3							1.00 (2107)	.779 (2107)	.931* (2102)	.849* (2105)	.623 (2009)	.644 (2017)	.745 (593)	.598 (673)	.720 (689)
Decoding 4								1.00 (2107)	.854* (2102)	.784* (2105)	.651 (2008)	.678 (2017)	.690 (593)	.727 (673)	.716 (689)
Decoding Total									1.00 (2102)	.908* (2100)	.652 (2004)	.677 (2012)	.783 (593)	.631 (670)	.750 (688)
LAB Total										1.00 (2105)	.748 (2007)	.770 (2015)	.881 (593)	.690 (672)	.806 (688)
AFQT %											1.00 (4246)	.946* (4247)	.772 (2033)	.708 (2187)	.728 (1893)
GT %												1.00 (4260)	.798 (2033)	.733 (2196)	.745 (1897)
Gates-MacGinitie RGL													1.00 (2445)	.696 (1020)	.639 (807)
Nelson-Denny RGL														1.00 (2437)	.719 (526)

*Correlation between a total score and one of its components.

Numbers in parenthesis refer to number of paired scores entering into correlations.

RELIABILITY

Reliability data for the LAB are given in Table 18. The first set of reliabilities given were computed by means of the Kuder-Richardson 21 formula. These numbers represent an assessment of the internal consistency of these LAB subtests. The Kuder-Richardson 21 computation makes the assumption that all items in a test have the same difficulty. Since this assumption may not hold true for all LAB subtests, an alternate method of estimating reliability was used. In this method, for 100 randomly selected test booklets from the AFEES administration, scores on each of the four Vocabulary and Paragraph subtests were decomposed into two parts, each part being associated with one of the two passages making up that subtest. Then a Pearson correlation was computed for each set of 100 pairs of scores. These correlations are also presented in Table 18. It should be noted that because these LAB subtests are timed, these procedures are to be preferred over the split half correlation usually performed to assess reliability (Thorndike, 1971).

Table 18

Reliabilities of LAB Subtests

Test	Number of Items	KR21	r Between Halves
Auding Paragraphs	24	.832	.71
Reading Paragraphs	24	.880	.77
Auding/Reading Paragraphs	28	.875	.79
Reading Vocabulary	28	.912	.80
Decoding I (100 WPM)	10	.869	-
Decoding II (150 WPM)	10	.868	-
Decoding III (200 WPM)	10	.834	-
Decoding IV (250 WPM)	10	.838	-

DIAGNOSTIC USES OF THE LAB

The LAB was developed so that a person's test scores could be used by an instructor or other test user in making decisions like the following:

1. Does this person show positive reading potential as defined in Figure 1?
2. If Reading, Auding or both Paragraph scores are low, is this mostly due to lack of relevant Vocabulary knowledge of the Paragraphs, or is it likely to be due to a lack of skill in remembering information from connected discourse?
3. If the person appears to lack skill in remembering information presented in prose format, is this likely to be due more to lack of decoding skill or to a particular problem in integrating information from connected discourse for storage in and retrieval from memory?

As with any test, the answers to these questions will not be a definite "yes" or "no"; rather, they are "perhaps" and "maybe", conclusions which will more than likely be combined with other formal or informal evaluation data to reach an instructional decision. Thus, some clinical judgment is necessary, and would presumably be enhanced with extended use of the LAB.

The three diagnostic decisions will be discussed in turn and then examples of individual score profiles will be presented and their interpretation discussed.

1. Does this person show reading potential using the Paragraphs Test?

A person can be described as showing reading potential if his or her Auding raw score is significantly higher than his or her Reading Paragraphs raw score. Given such a diagnosis, the recommended treatment would be instruction in decoding (phonics; structural analysis; use of oral language knowledge and context cues to facilitate word recognition) and extensive practice in reading. Such a course, if successful, might bring the person's Reading score up to the level of the Auding score, which establishes his or her reading potential.

A very poor reader whose Auding score is no higher than his or her Reading score shows no evidence of having high oral language skills and knowledge to draw upon in comprehending what is read. Such a person might require extensive training in verbal concepts, vocabulary, etc., if either reading or auding skills are to be brought up to an acceptable level.

A user of this test should not be surprised if a person performs better on the Reading Paragraphs Test than on the Auding Test. Indeed, in the LAB norming study, this was found to be typical of all but the very poorest groups of readers. In general, it was found to be the case that poor readers are very frequently also poor auders. This implies that for most youth and adults who are poor readers, extensive training in general language skills are in order.

2. If Reading, Auding, or both Paragraph scores are poor, is this mostly due to lack of relevant Vocabulary knowledge for the Paragraphs, or it is more

likely to be due to a lack of skill in storing information from connected discourse in a retrievable manner?

Information relevant to this question can be obtained by comparing a person's Vocabulary score with the Paragraph score in the same modality. Since the number of items on the Vocabulary Tests are different than the Paragraph Tests, percent correct, or percentile equivalents of raw scores should be compared, rather than the raw scores themselves. Percentile equivalents to these LAB scores can be obtained from Column 2 of Tables 8 and 11. A person who has a low Paragraph score but a fairly high Vocabulary score may be diagnosed as having trouble with processing connected discourse and storing it in memory for further use, though he or she knows the meanings of the individual words and concepts involved. Such a person might most benefit from a training program which emphasizes getting and remembering information from longer units of prose, as well as learning strategies. On the other hand, a person with low Paragraph scores matched by low scores on the LAB Vocabulary Tests will require extensive vocabulary training. A person's LAB Auding/Reading and Reading Vocabulary scores can also be compared with each other to give an additional indication of whether reading potential exists. A person with both scores very low would appear to need much training in the meanings of words and concepts. On the other hand, one whose score is low only on the Reading Vocabulary Test, may require mainly decoding training.

3. If the person appears to lack skill in storing information in a retrievable manner, is this likely to be due to lack of decoding skill or a particular problem in integrating information from connected discourse for storage and retrieval?

For a person with a low Reading Paragraphs score, a low percentile equivalent on the Decoding Test indicates that decoding training is in order. A person with a low Reading Paragraphs score whose Decoding scores are relatively high appears mainly to be having difficulty with the more complex aspects of storing and remembering what he or she reads and may be less likely to benefit substantially from decoding training alone.

INTERPRETING INDIVIDUAL LAB PROFILES

The first step in interpreting a person's LAB scores is to obtain the percentile equivalents of these raw scores from the norming tables. For most purposes, equivalents to scores on the Auding and Reading Paragraphs Tests, Auding/Reading and Reading Vocabulary and Decoding Total scores should be sufficient. These equivalents can be found in column 2 of Tables 8 - 11 and 13, respectively.

To illustrate how diagnostic interpretation may proceed, we will discuss score profiles of three hypothetical individuals keeping in mind that in a real situation other information about the nature of a person's problem would probably be available. All of these people have achieved a LAB Reading Paragraph score of 10, equivalent to the 21st percentile. This corresponds to a Gates-MacGinitie RGL of 5.7. An adult receiving this reading score might well be referred for basic skills diagnosis and training in the military or elsewhere.

Person A scores as follows: Reading Paragraphs 10, 21st percentile;
Decoding Total 18, 15th percentile;
Reading Vocabulary 18, 17th percentile;
Auding Paragraphs 15, 51st percentile;
Auding/Reading Vocabulary 26, 52nd percentile;

Person A's percentile equivalents are graphed as in Figure 2.

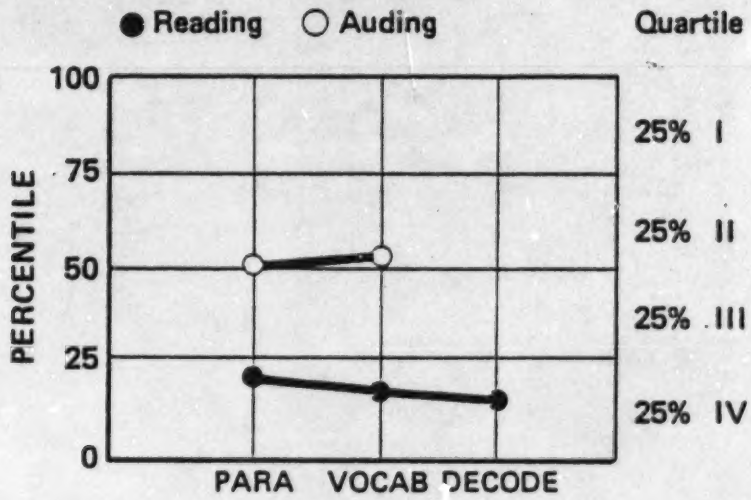

Figure 2. LAB Score Profile of Person A

Interpretation A: This person scores in the bottom quarter of people who took the LAB test on all three Reading Subtests: Reading Paragraphs, Reading Vocabulary and Decoding Total. His Auding scores are considerably higher, at around the group mean, indicating considerable reading potential. The difference between Auding and Reading is as great with Vocabulary as with Paragraphs. This combined with the very low Decoding score, suggests this individual has a true deficit in reading decoding skills. He should benefit from decoding training.

Person B receives the following scores:

Reading Paragraphs 10, 21st percentile;
Reading Vocabulary 26, 62nd percentile;
Decoding Total 28, 40th percentile;
Auding Paragraphs 8, 15th percentile;
Auding/Reading Vocabulary 27, 76th percentile;

Person B's percentile equivalents are graphed as in Figure 3.

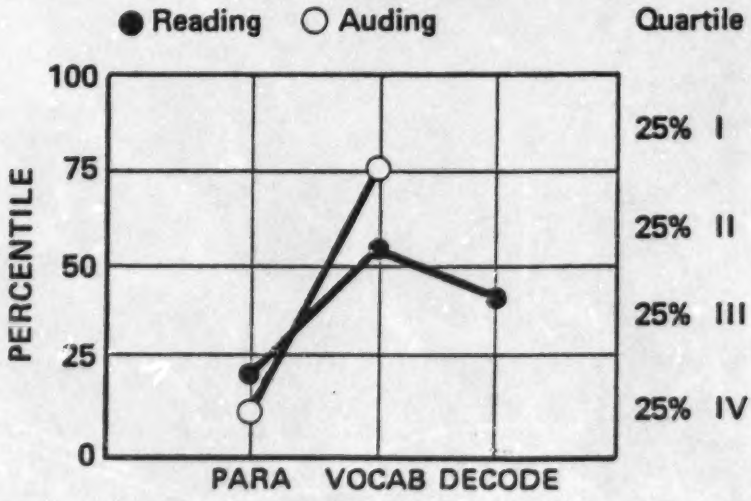

Figure 3. LAB Score Profile of Person B

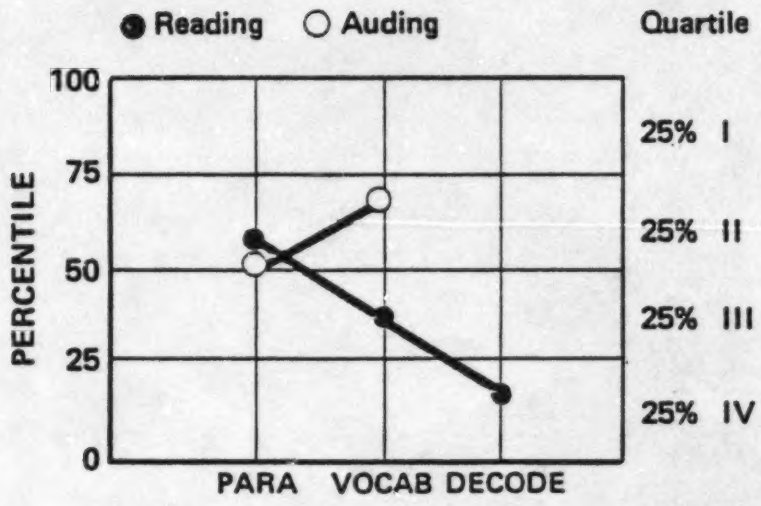

Figure 5. LAB Score Profile of Person D

REFERENCES

Brown, J.I., Nelson, M.J., & Denny, E.C. *The Nelson-Denny Reading Test.* Boston, MA: Houghton Mifflin Company, 1976.

CTB/McGraw-Hill. *Tests of Adult Basic Education, Level D.* Monterey, CA: McGraw-Hill, 1976.

Department of Defense. *Implementation of New Armed Services Vocational Aptitude Battery and Actions to Improve the Enlistment Standards Process.* A Report to the House and Senate Committees on Armed Services. Washington, D.C.: Office of the Assistant Secretary of Defense (Manpower, Reserve Affairs, and Logistics), 31 December 1980.

Durrell, D., and Brassard, M. *Durrell Listening-Reading Series: Intermediate Level.* New York: Harcourt, Brace, Jovanovich, 1970.

Educational Testing Service. *Basic Skills Assessment Program, Reading Test.* Menlow Park, CA: Addison-Wesley, 1977.

Foulke, E. & Sticht, T.G. "A Review on the Intelligibility and Comprehension of Accelerated Speech." *Psychological Bulletin*, Vol. 72, 1969, pp. 50-62.

Gates, A.E. & MacGinitie, W.H. *Gates-MacGinitie Reading Tests Survey D.* New York: Teacher's College Press, 1965.

Gibson, E. and Levin, H. *The Psychology of Reading.* Cambridge, MA: The MIT Press, 1975.

Karlson, B., Madden, R., & Gardner, E.F. *Adult Basic Learning Examination, Levels II and III.* New York: Harcourt Brace & World, 1971.

Mathews, J.J., Valentine, L.D., & Sellman, W.D. *Prediction of Reading Grade Levels of Service Applicants From Armed Services Vocational Aptitude Battery.* AFHRL-TR-78-82, Brooks AFB, TX: Air Force Human Resources Laboratory, December 1978.

Mitzel, M.A. "The Functional Reading Word List for Adults." *Adult Education*, Winter 1966, pp. 67-69.

Sticht, T.G. "The Acquisition of Literacy by Children and Adults." In: F. Murray and J. Pikulski (Eds.) *The Acquisition of Reading.* Baltimore, MD: University Park Press, 1978.

Sticht, T.G. & Beck, L.J. *Experimental Literacy Assessment Battery (LAB).* AFHRL-TR-76-51. Lowry AFB, CO: Air Force Human Resources Laboratory, August 1976.

Sticht, T.G., Hooke, L.R., and Caylor, J.S. *Literacy, Oracy, and Vocational Aptitude as Predictors of Attrition and Promotion in the Armed Services.* Final Report 81-11, HumRRO FR-ETSD-81-11, Alexandria, VA: Human Resources Research Organization, September 1981.

Thorndike, R.L. (Ed.). *Educational Measurement (Second Edition).* Washington, D.C.: American Council on Education, 1971.